SERVICE MANUAL

FISHER

AX 5700

CAR STEREO PLAYER

THE FIRST NAME IN HIGH FIDELITY

SPECIFICATIONS

Tape speed ····· 4.75 cm/s
Fast forward time ····· 130sec. (C-60 cassette)
Rewind time····· 140sec. (C-60 cassette)
Wow & Flutter ····· 0.2 % WRMS. (CCIR)
Crosstalk ····· Better than 45 dB (track to track)
Stereo separation (FM)··· 35 dB (at 1000Hz)
Signal to noise ratio (FM) Better than 47 dB
Frequency responce (400Hz = 0 dB, FM) ··· 50 ~ 12500 Hz (± 4.5 dB)
with pre-emphasis 50 μs

Power source····· DC12V
Current consumption ····· Play 800mA (at VR min.)
Ground polarity ····· Negative pole ground
Frequency range ····· LW. 146 ~ 353kHz
MW 513 ~ 1620kHz
FM 87.5 ~ 108MHz
Sensitivity (for 50mW output) LW 100μV
MW 30μV
FM 2μV (S/N = 26dB)

NOTE : Specifications are subject to change without notice.

ALIGNMENT PROCEDURES

General

Test Conditions

Signal generator output;
Modulation frequency 400Hz
Modulation percentage 30 %
Signal level just high enough to provide meter deflection.

Signal application;
Antenna receptacle theru the dummy antenna.

Output meter connection;
Across a speaker or a dummy load (100 ohm) or FTA600 or FTA650.

Setting of radio controls;
Volume control at maximum response.
Tone control at high note emphasis.

Power supply 14V
* Location of the components for alignment are shown in CIRCUIT BOARD DIAGRAM (TOP VIEW).

NOTE: THE HEAD MUST BE CLEANED AND DEGAUSSED BEFORE ANY TESTING.

ADJUSTMENT A-1; AZIMUTH ADJUSTMENT

1. Test tape: MTT-114 (10k)
2. Adjusting point: azimuth adjusting screw
3. Function: Tepe ····· normal
Dolby ····· off
4. Instrument: VTVM, Oscilloscope

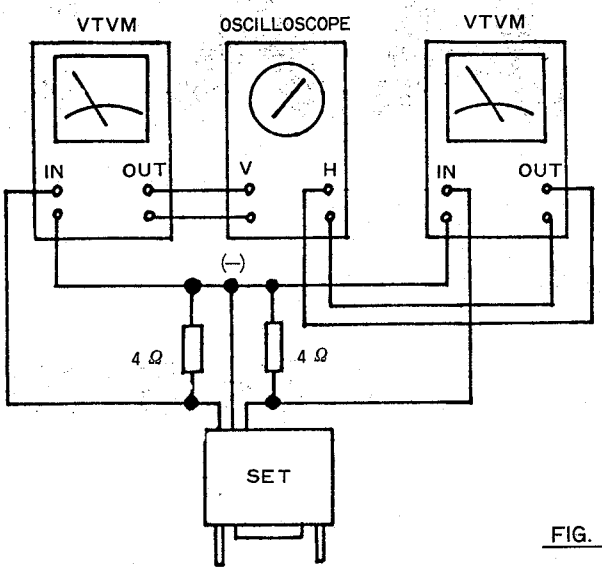
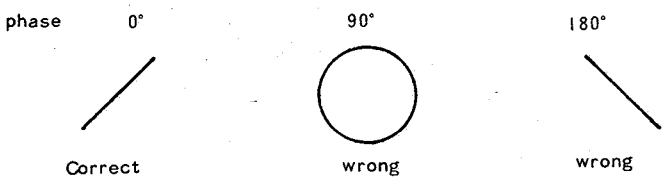


FIG. 1

5. Adjustment method:
Turn the azimuth adjusting screw until you obtain the maximum reading on the V.V. aod correct phase the OSILLO.
6. Note:

FIG. 2 Lissajous' figure



ADJUSTMENT A-2: DOLBY LEVEL ADJUSTMENT

1. Test tape: MTT-150 (DOLBY B-TYPE TONE)
2. Adjusting point: R31/131
3. Function: Tape····· normal
Dolby ····· off
4. Instrument: VTVM,

ALIGNMENT PROCEDURES

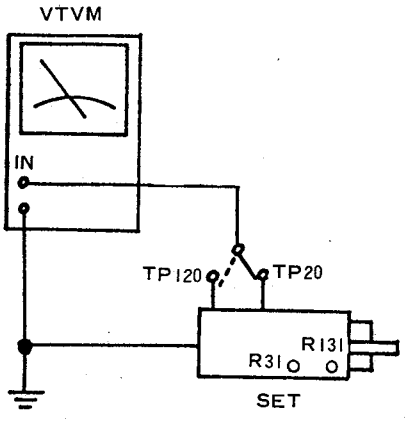


FIG. 3

5. Adjustment method:
   Play the tape at the forward position and adjust respectively the SVR R31/131 to get 580mV at TP20/120.
   Check the output level of TP20/120 at the reverse possition within limit. (580mV± 1.0dB)

CHECK B-1; DIFFERENCE OF OUTPUT LEVEL BETWEEN LEFT AND RIGHT CHECK

1. Test tape: MTT-118 (1k)
2. Function: Tape ..... normal
   Dolby ..... off
   Balance ..... left ⟷ right
3. Limit: less than 3dB at speaker terminals
4. Instrument: VTVM, Oscilloscope

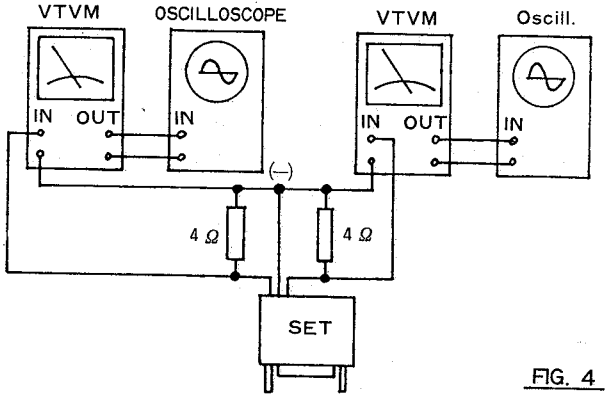


FIG. 4

5. Measurerment method:
   Play the tape and adjust the volume control to give a level of 500mW.
   Set the balance control to the left position and read the level on the V.V..
   Set the balance control to the left position and read the level on the V.V..
   The difference of output level between left and right is difference of these two readings.
6. Note:
   Check the forward and reverse positions.

CHECK B-2: RANDOM NOISE AND S/N CHECK

1. Test tape: MTT-150 (DOLBY B-TYPE TONE)
   BLANK BIASED TAPE (CrO_2)
2. Function: Tape ..... normal
   Dolby ..... off
3. Limit: at sperker terminals
   Random noise ..... less than 150mV
   S/N ..... more than 48dB
4. Instrument: The same as CHECK B-5
5. Measurement method:
   Random noise
   Switch CCIR' filter to flat position.
   Play the tape (CrO_2 blank biased tape) and adjust the volume control to the maximum position.
   Read the random noise level on the V.V..
   S/N
   Switch CCIR filter to flat position.
   Play the tape (MTT-150) and adjust the volume control to give a level of 1 watt.
   Remove the tape (MTT-150) and play blank biased tape (CrO_2).
   Switch CCIR filter to "weighted", and read the noise level on the V.V..
   S/N is difference between these readings.
6. Note:
   Check the left and rght channel both forward and reverse position.

CHECK B-3; PLAY BACK RESPONSE CHECK

1. Test tape: MTT-215B (8k/315)
   MTT-215M (12.5k/315)
2. Function: Tape ..... normal
   Dolby .....off
3. Limit: Shown as FIG. 5 at Dolby Test Point

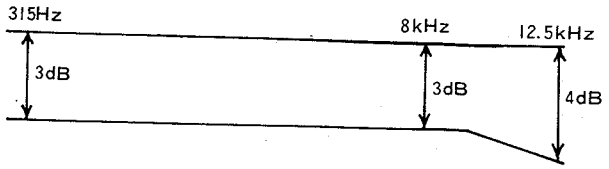
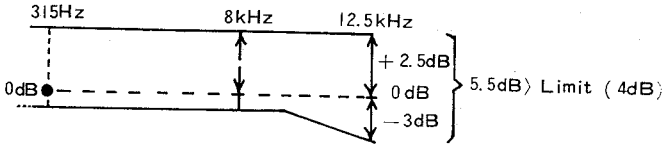


FIG. 5

4. Instrument: The same as CHECK A-2.
5. Measurement method:
   Play the tape (MTT-215B and MTT-215M) and check the frequency response within limit.
6. Notes:
   a. Check the left and right channel both the forward and reverse position.
   b. Change the range of scale to the proper position in order to read easily, due to the level between MTT-215B and MTT-215M are different.
   c. The following data is out of limit.
   315Hz= 0 dB 8kHz= +2.5dB, 12.5kHz= –3dB



7. Reference: DOLBY STANDARD (Group C)

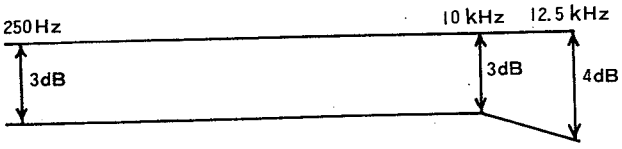


FIG. 6

CHECK B-4; DOLBY LEVEL CHECK

1. Test tape: MTT-150 (DOLBY B-TYPE TONE)
2. Function: Tape ..... normal
   Dolby ..... off
3. Limit: 580mV± 1.0dB at TP20/120
4. Instrument: The same as ADJUSTMENT A-2
5. Measurement method:
   Play the tape and check Dolby level within limit.
6. Note:
   Check the left and right channel both the forward and reverse position.

CHECK B-5; DOLBY NR EFFECT CHECK

1. Test tape: MTT-150 (DOLBY B-TYPE TONE)
   BLANK BIASED TAPE (CrO_2)
2. Function: Tape CrO2
   Dolby ..... off ⟷ on
3. Limit: more than 8dB at speaker terminals
4. Instrument: DOLBY FILTER ..... NF M-174
   Oscilloscope

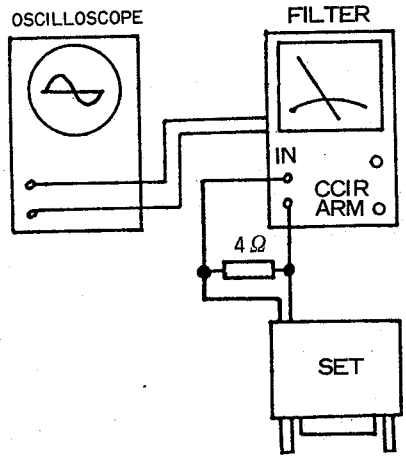


FIG. 7

5. Measurement method:
   Switch CCIR filter to flat position.
   Play a standard Dolby Level test tape, adjust the volume control to give a level of 1 watt into 4 ohms load.
   Insure all tone controls are set to flat or out position.
   Remove a standard tape, switch off noise reduction, and play blank biased tape at CrO_2 position.
   Switch CCIR filter to "weighted", and read the noise level on the V.V. (M-174).
   Switch noise reduction on, and note new reading of V.V. (M-174).
   Noise reduction effect is difference between these two noise readings.
6. Note:
   1. Check the left and right channel both the forward and reverse position.
   2. Blank biased tape used must be CrO_2, not Fe203.

CHECK B-6; TAPE SPEED AND WOW & FLUTTER CHECK

1. Test tape: MTT-111 (3k)
2. Function: Tape ..... normal
   Dolby ..... off
3. Limit: Tape speed ..... less than +2.5%, more than −1.5%
   Wow & flutter ... less than 0.38% (CCIR weighted)
4. Instrument: Wow & FLUTTER METER... MEGURO MR-667B (MK-668A)
   VTVM, Oscilloscope

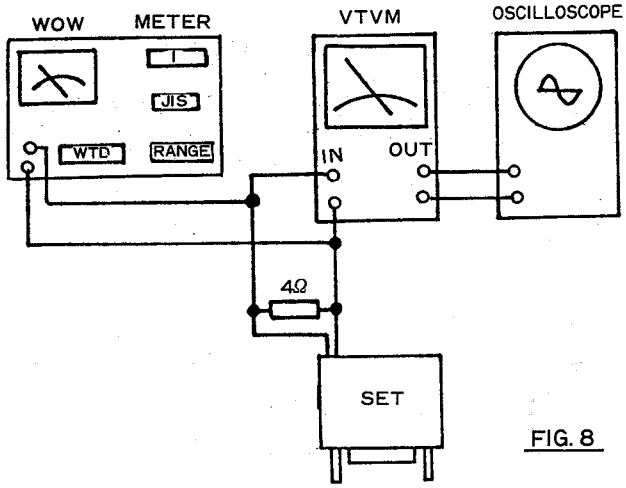


FIG. 8

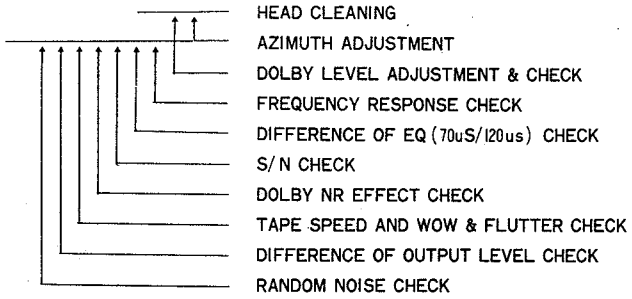
5. Measurement method:
   Play the tape and check the Wow & flutter and tape speed within limit.
6. Note:
   a. Read the average of indicating level, while measuring a Wow & flutter for 10 seconds or so.
   b. If it is not enough showing a pointer on the scale, change the range of Wow & flutter meter to proper position in order to read easily.
   c. Adjust the volume control to light up level for indicating lamp which is located on the input terminal of Wow & flutter meter.

CHECK B-7; DIFFERENCE OF OUTPUT LEVEL BETWEEN NORMAL AND CrO_2 POSITION

1. Test Tape: MTT-114 (10k)
2. Function: Tape ..... normal ⟷ CrO_2
   Dolby ..... off
3. Limit: more than 3dB at speaker terminals
4. Instrument: The same as CHECK B-1
5. Measurement method:
   Play the tape (MTT-114) and adjust the volume control to give a level of 500mW at normal position.
   Switch CrO_2 on, and read a difference of output level between normal and CrO_2 position.
6. Note:
   Check the left and right channel both the forward and reverse position.

ALIGNMENT PROCDDURES

REPAIR PROCESS

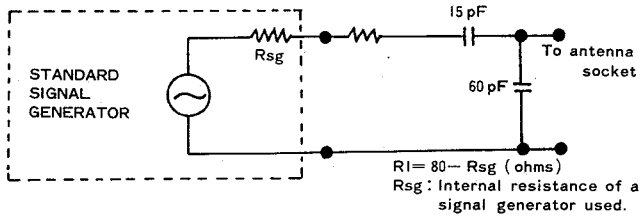


MW and LW and STOP Alignment

STEP	Signal Input	Frequency of Signal Gen	Dial Setting of Radio	Test Equipment Connection	Adjustment
1	MW		513 kHz 1620 kHz	Connect a Voltage Meter to TP903 and Common ground	Adjust L303 for voltage to be 1.0V (A)
2	LW		353 kHz		Adjust L302 for voltage to be 8.0V
3	Thru dummy ANT. (Fig.9)	603 kHz	603 kHz	Connect a VTVM to SP. terminal	Tune T300, T302 for maximum output
4		1404 kHz	1404 kHz		Tune CT300, CT302 fo for maximum output
5		999 kHz	999 kHz		Tune T304 for maximum output
6					Repeat steps 3,4
7		164 kHz	164 kHz		Tune T301, T303 for maximum output
8		254 kHz	254 kHz		Tune CT301, CT303 for maximum output
9					Repeat steps 6,7
10		200 kHz	200 kHz	Connect a Voltage Meter to TP800 and common ground	Tune T800 for maximum Voltage

Fig. 9

DUMMY ANTENNA FOR MW AND LW RF ALIGNMENT

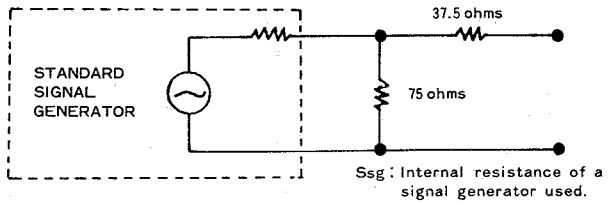


FM Alignment

STEP	Signal Input	Frequency of Signal Gen	Dial Setting of Radio	Test Equipment Connection	Adjustment
1	Thru dummy ANT. (Fig.10)	98.00 MHz	98.00 MHz	Connect a Voltage Meter to R210 and common ground	Tune T200, T400 for minimum Voltage
2				Connect a VTVM to SP. terminal	Adjust VR R214 for 3 dB limiting to be 18 dB

Fig. 10

DUMMY ANTENNA FOR FM RF ALIGNMENT



FM MULTIPLEX ALIGNMENT (PLL)

PRELIMINATIES :

1. A stereo signal modulator (SSM) is necessary to perform this alignment.
2. All adjustments below must be done, setting the frequency at 98.00 MHz and applying 60 dB FM signal modulated by specified signals as described below.

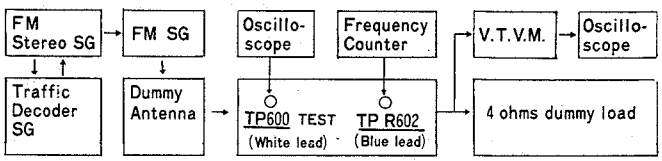
Step	Alignment	Instrument Connections		Adjustment
		Input	Output	
1	19 kHz Pilot	No signal condition	Connect frequency counter to TP250 (Green leab) and common ground.	Adjust VR (R259) for frequency to be 19.00 kHz.
2	Stereo Signal	Apply FM stereo signal (modulated only by pilot signal at 10% modulation and stereo signal at 30% modulation) thru' dummy ant. to ant. terminals. Place output signal switch of S.S.M. in right position.	Connect VTVM to speaker output leads of Left Channel.	Stereo Separation Control VR (R255) for minimum output on VTVM.
3		Set the output signal under input level of 35 dB.	Connect VTVM to speaker output leads of Left channel.	Adjust the control R211 to make a separation of 10 dB between Left and Right channel.

TRAFFIC DECODER ALIGNMENT

1. TEST EQUIPMENT REQUIRED

- *FM Signal Generator
- *FM Stereo Signal Generator
- *Traffic Decoder Signal Generator
- *Frequency Counter
- *V.T.V.M.
- *Oscilloscope (30 MHz)
- *Oscilloscope (Audio)
- *4 ohms Dummy Load
- *DC Power Supply

2. TRAFFIC DECODER TEST EQUIPMENT SET-UP DIAGRAM



3. ALIGNMENT PROCEDURE

Step	Signal Input	FM SG	Stereo SG	Traffic SG	Dial Setting	Adjust For
1	Through dummy load	98 MHz 1 kHz 30% Mod. Input; 60 dBu			98 MHz	
2		98 MHz EXT. Mod. Input; 60 dBu	19 kHz Pilot signal OFF	57 kHz Traffic Signal OFF	98 MHz	R600 for 57 kHz Connect the frequency counter to TP R602 (Blue lead)
3			No Mod.	57 kHz Traffic signal ON 3.75kHz Mod.		T600 Get to maximum output waveform after connecting oscilloscope to TP600 (white lead)

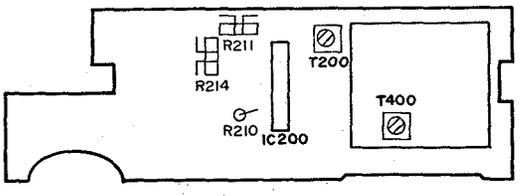
TRAFFIC DECODER ALIGNMENT (DK)

1. Connect frequency counter to TP650 (Yellow lead) and common ground.
2. Adjust VR (R653) for frequency to be 125 Hz.
3. Input is under the no signal condition.

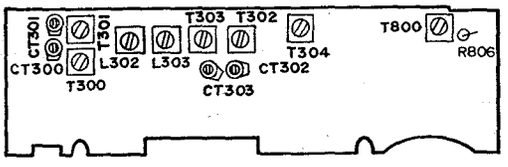
CLOCK ALIGNMENT (LOGIC)

1. Connect frequency counter to TP901 and common ground,
2. Adjust trimmer CT901 for frequency to be 50,000 Hz.

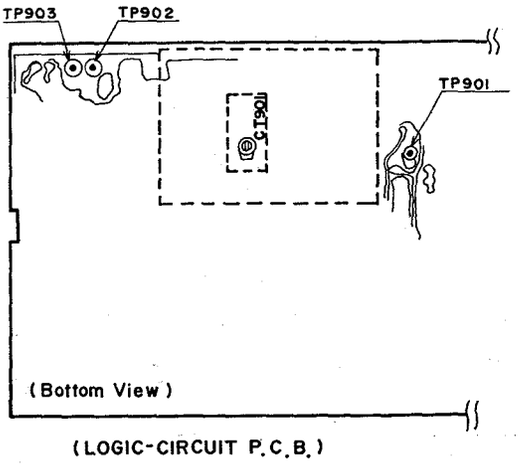
MAIN PARTS IDENTIFICATION



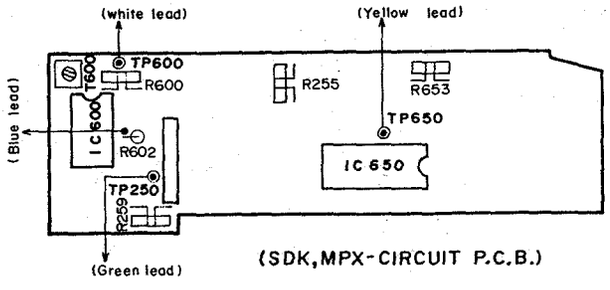
(FM-CIRCUIT P.C.B.)



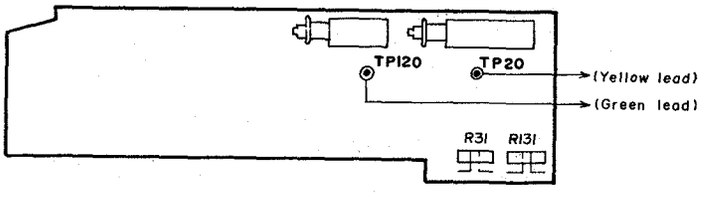
(AM and STop-CIRCUIT P.C.B.)



(LOGIC-CIRCUIT P.C.B.)



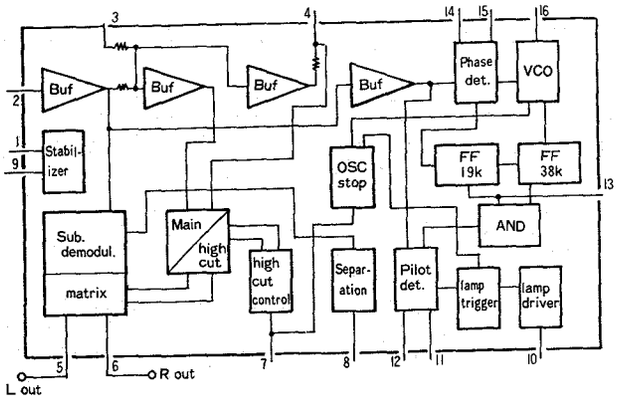
(SDK,MPX-CIRCUIT P.C.B.)



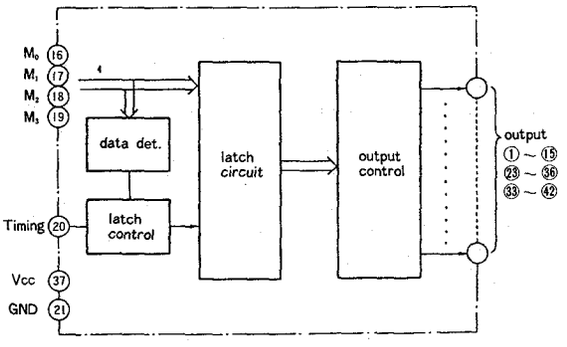
(PreAmp, DOLBY-CIRCUIT P.C.B.)

IC FUNCTION

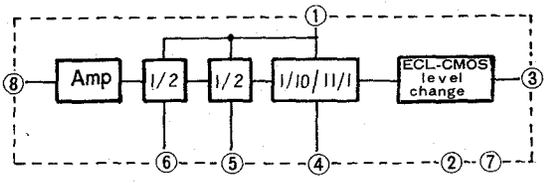
IC250



IC907

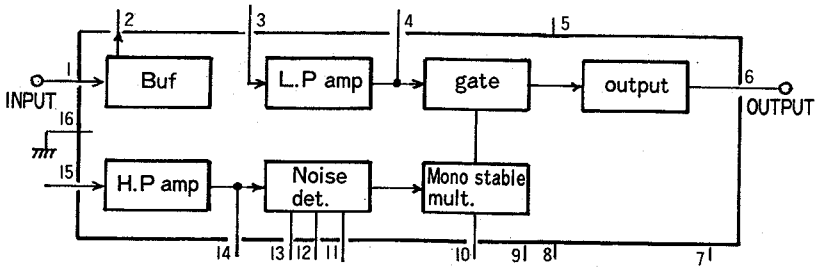


IC904

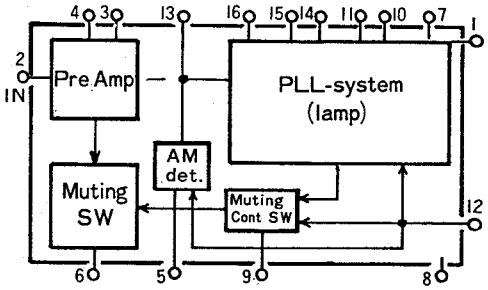


IC FUNCTION

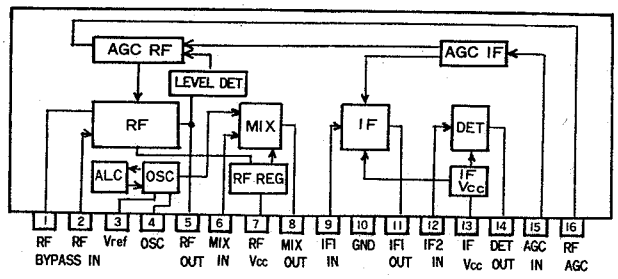
IC500



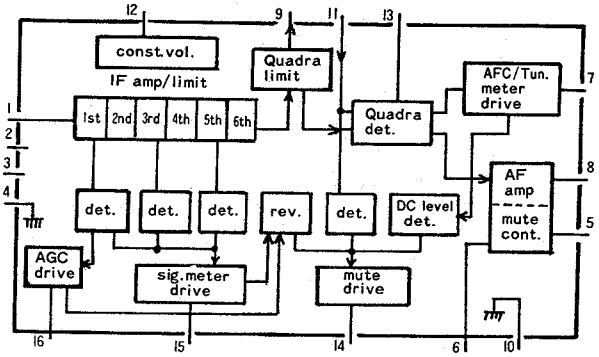
IC600



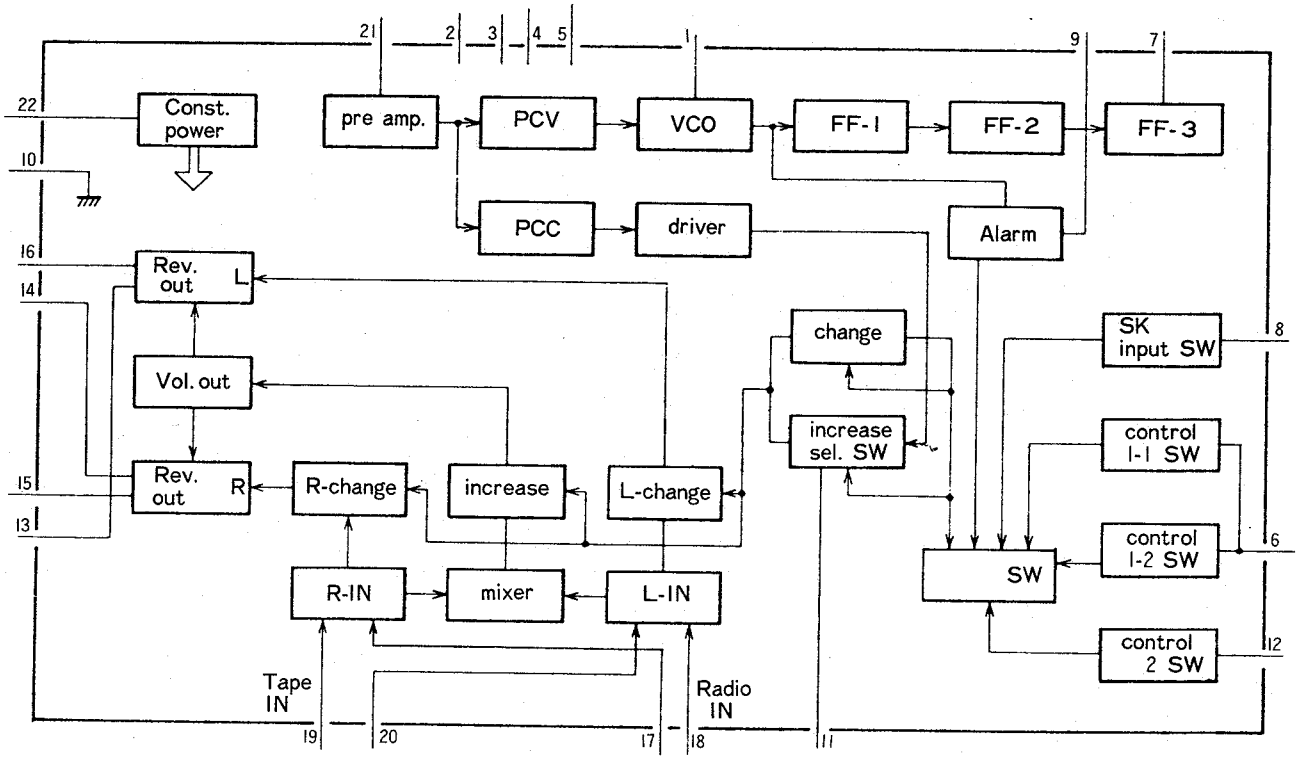
IC300



IC200

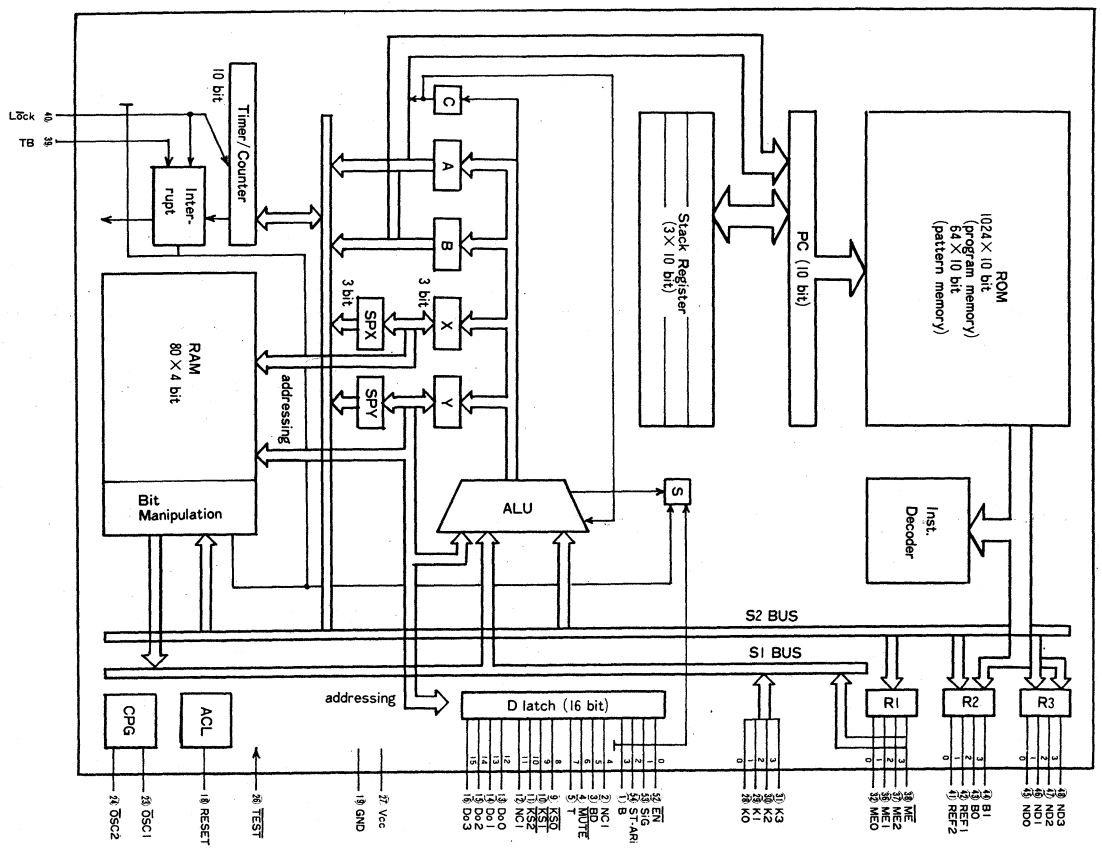


IC650

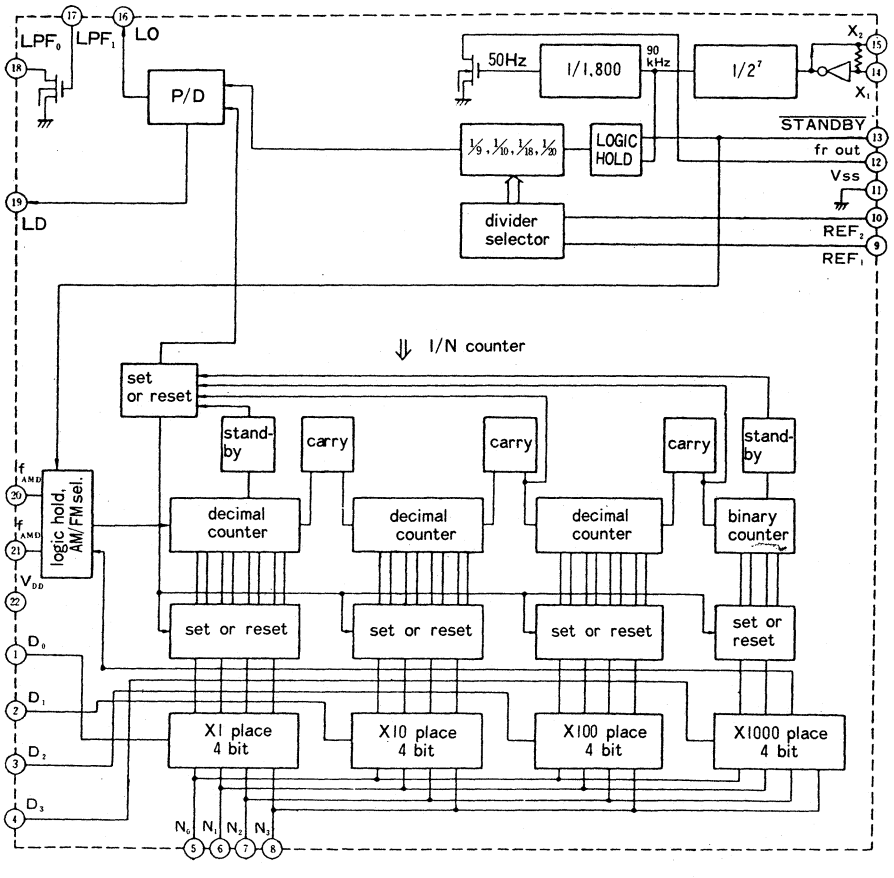


IC FUNCTIONS

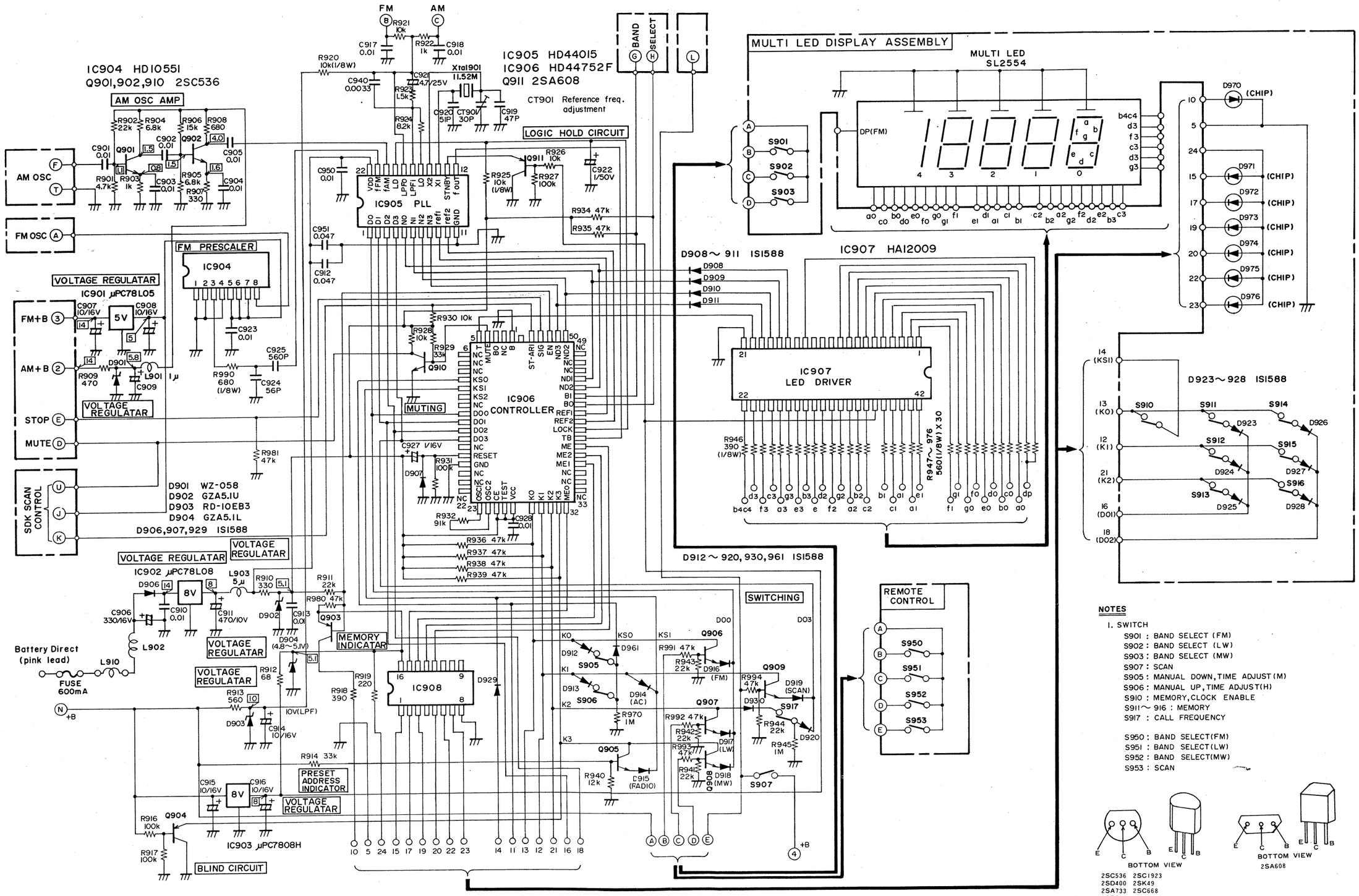
IC906



IC905



SCHEMATIC DIAGRAM (LOGIC)

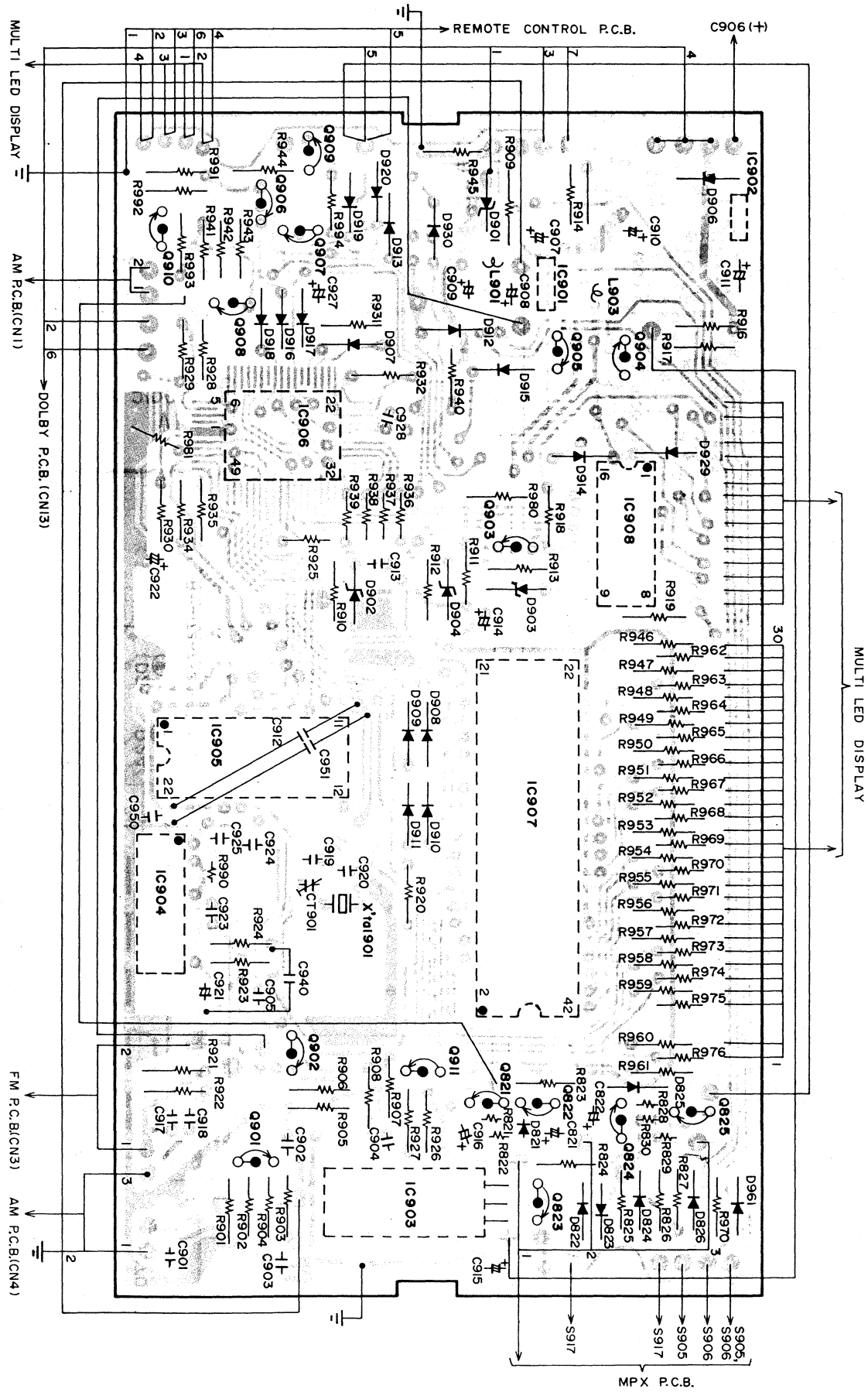


NOTES

1. SWITCH
   - S901 : BAND SELECT (FM)
   - S902 : BAND SELECT (LW)
   - S903 : BAND SELECT (MW)
   - S907 : SCAN
   - S905 : MANUAL DOWN, TIME ADJUST (M)
   - S906 : MANUAL UP, TIME ADJUST (H)
   - S910 : MEMORY, CLOCK ENABLE
   - S911~916 : MEMORY
   - S917 : CALL FREQUENCY
   - S950 : BAND SELECT (FM)
   - S951 : BAND SELECT (LW)
   - S952 : BAND SELECT (MW)
   - S953 : SCAN

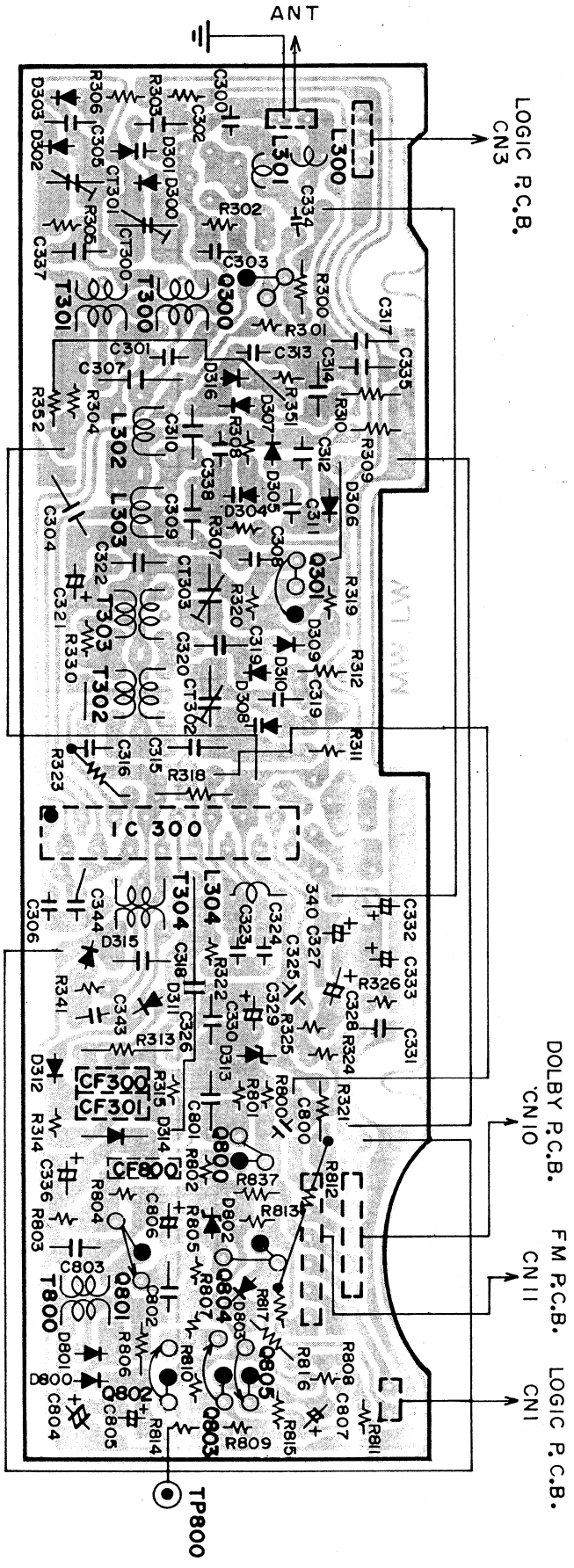
2SC536 2SC1923
2SD400 2SK49
2SA733 2SC668
2SB544

LOGIC P.C.B. Bottom

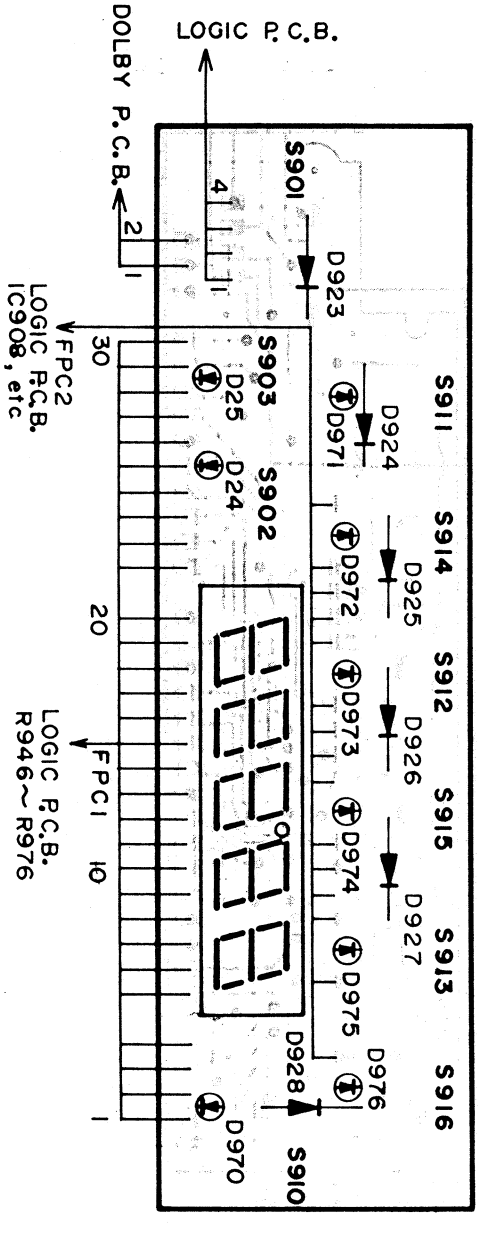


WIRING DIAGRAM

AM P.C.B. Bottom

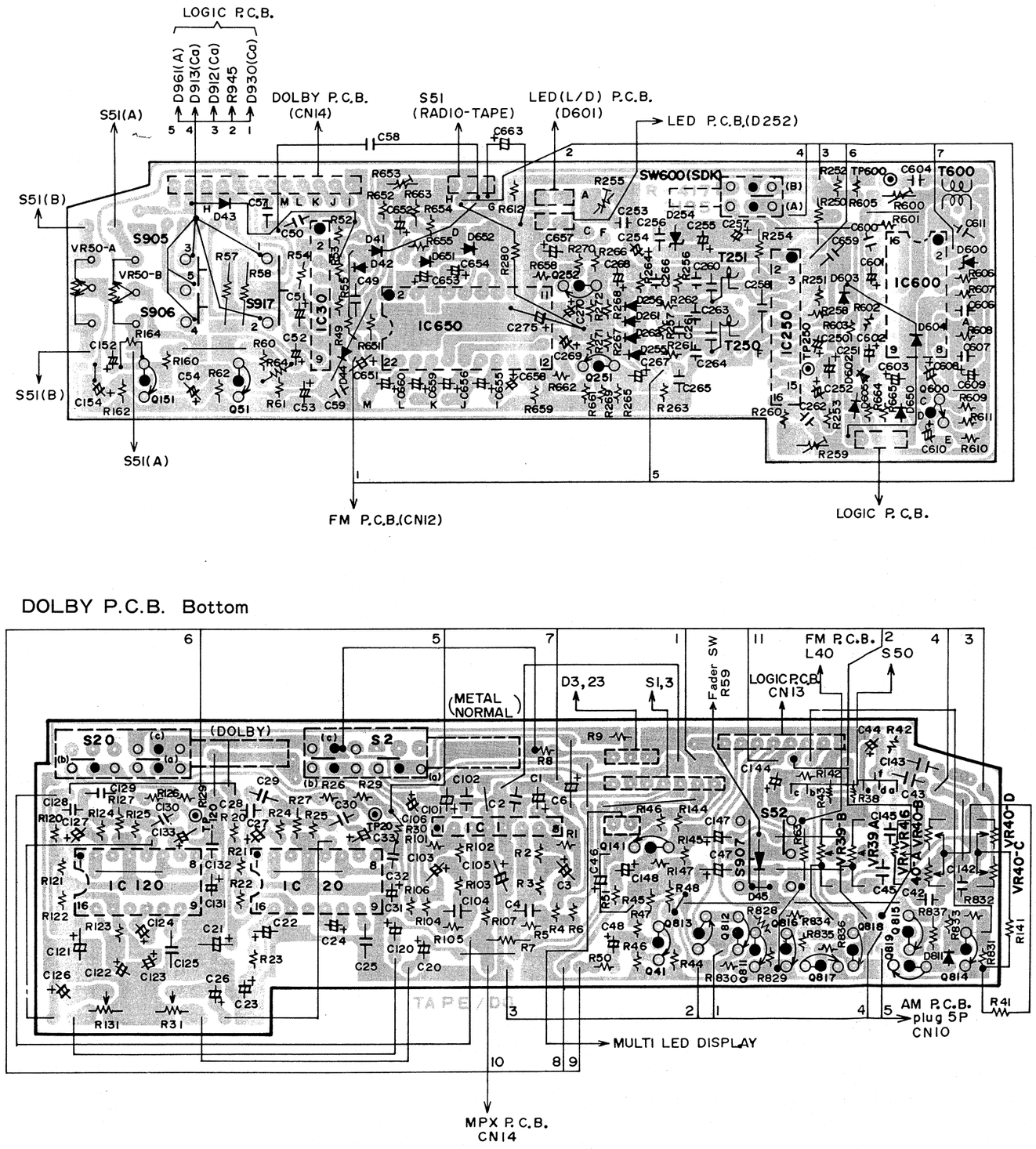


MULTI LED DISPLAY
P.C.B. Bottom



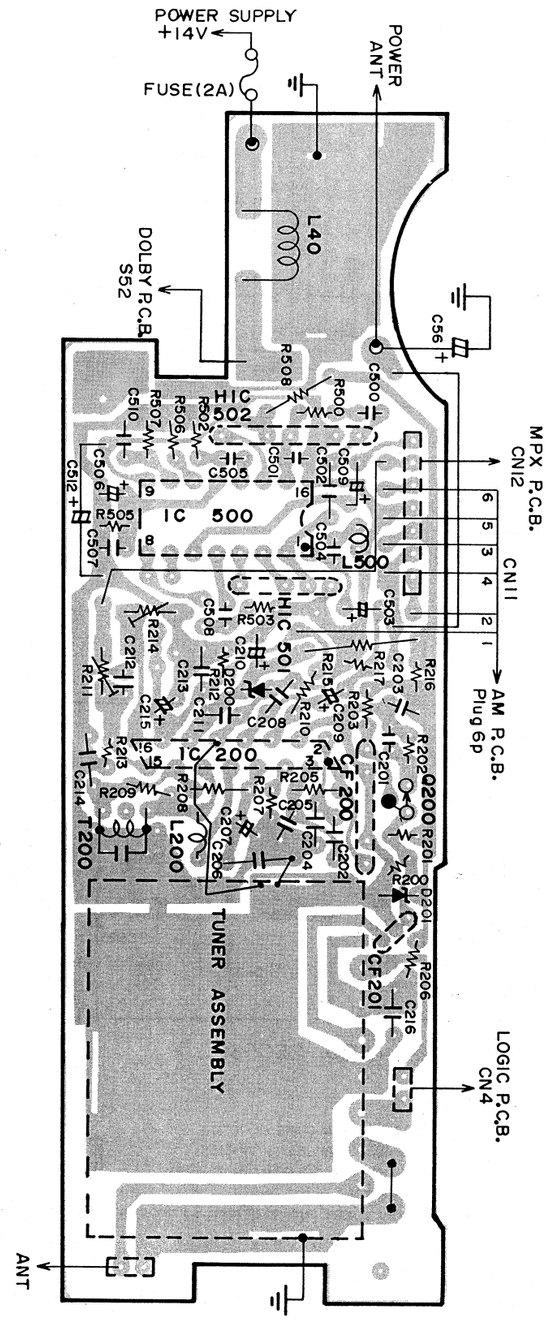
WIRING PIAGRAM

MPX P.C.B. Bottom

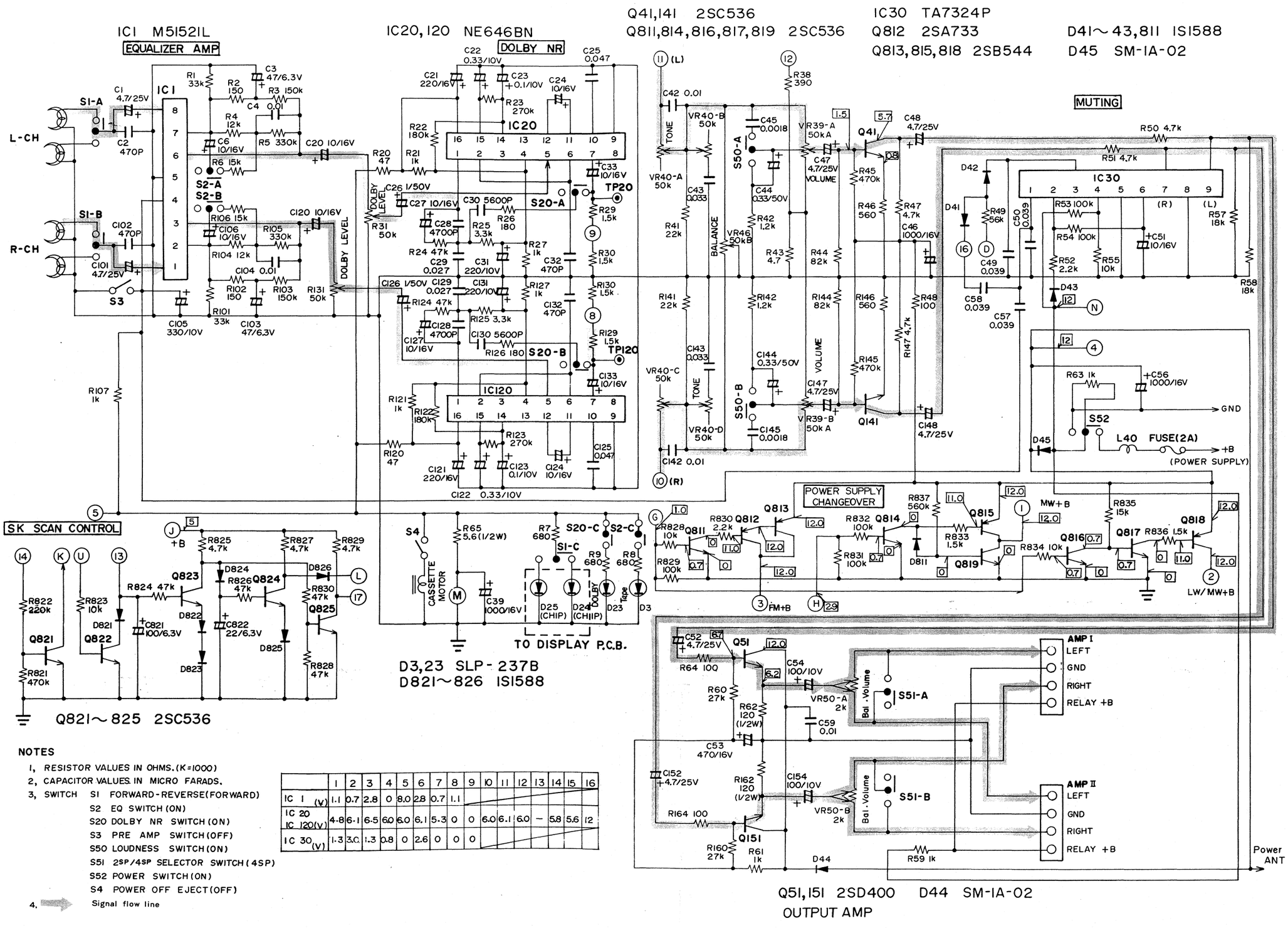


DOLBY P.C.B. Bottom

FM P.C.B. Bottom



SCHEMATIC DIAGRAM



NOTES

1, RESISTOR VALUES IN OHMS. (K=1000)

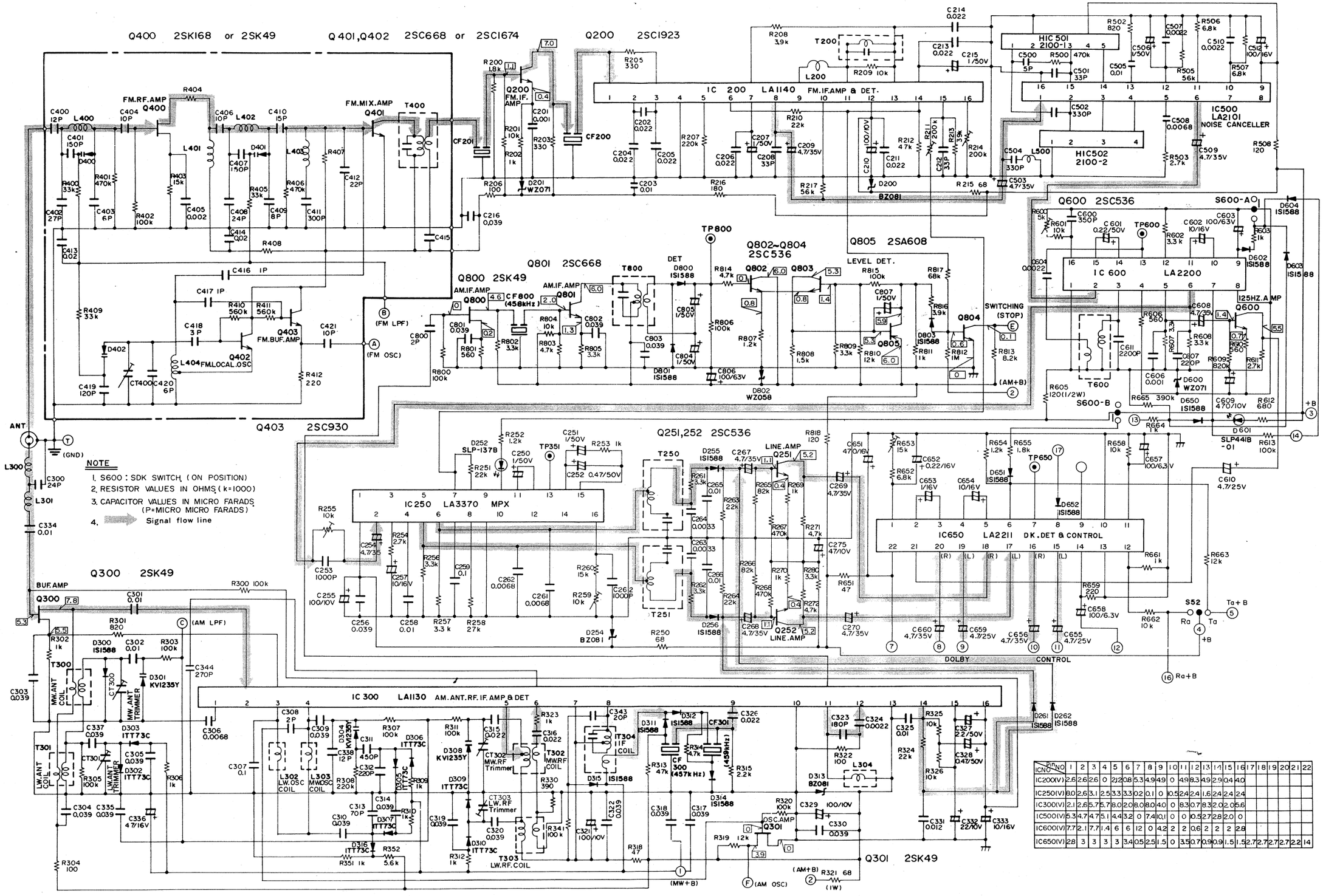
2, CAPACITOR VALUES IN MICRO FARADS.

3, SWITCH S1 FORWARD-REVERSE(FORWARD)
S2 EQ SWITCH (ON)
S20 DOLBY NR SWITCH (ON)
S3 PRE AMP SWITCH (OFF)
S50 LOUDNESS SWITCH (ON)
S51 2SP/4SP SELECTOR SWITCH (4SP)
S52 POWER SWITCH (ON)
S4 POWER OFF EJECT (OFF)

4, Signal flow line

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
IC 1 (V)	1.1	0.7	2.8	0	8.0	2.8	0.7	1.1								
IC 20 IC 120 (V)	4.8	6.1	6.5	6.0	6.0	6.1	5.3	0	0	6.0	6.1	6.0	–	5.8	5.6	12
IC 30 (V)	1.3	3.0	1.3	0.8	0	2.6	0	0	0							

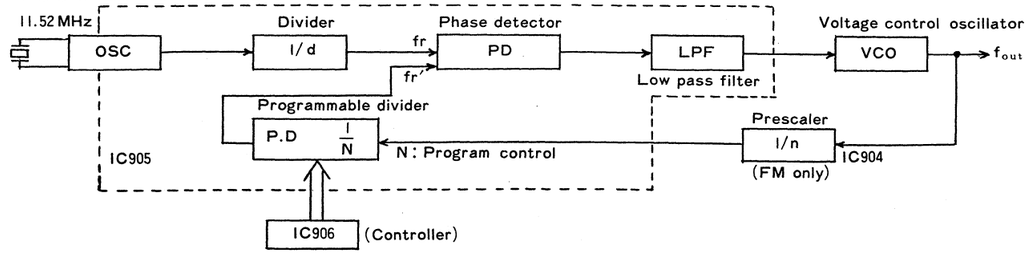
SCHEMATIC DIAGRAM



IC NO / Pin NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
IC200(V)	2.6	2.6	2.6	0	2	2.0	8	5.3	4.9	4.9	0	4.9	8.3	4.9	2.9	0.4	4.0					
IC250(V)	8.0	2.6	3.1	2.5	3.3	3.3	0.2	0.1	0	10.5	2.4	2.4	1.6	2.4	2.4	2.4						
IC300(V)	2.1	2.6	5.7	5.7	8.0	2.0	8.0	8.0	4.0	0	8.3	0.7	8.3	2.0	2.0	5.6						
IC500(V)	5.3	4.7	4.7	5.1	4.4	3.2	0	7.4	10.1	0	0	0.5	2.7	2.8	2.0	0						
IC600(V)	7.7	2.1	7.7	1.4	6	6	12	0	4.2	2	2	0.6	2	2	2	2.8						
IC650(V)	2.8	3	3	3	3	3.4	0.5	2.5	1.5	0	3.5	0.7	0.9	0.9	1.5	1.5	2.7	2.7	2.7	2.7	2.2	14

DESCRIPTION

1. BASIC OPERATION OF PLL SYNTHESIZER



The illustration above is a block diagram which is a fundamental PLL synthesizer.

In order to obtain reference frequency fr, the frequency of 11.52 MHz generated from a crystal oscillator (OSC) is passed into a divider circuit of 1/d.

This fr is compared with fr', and runs through phase detector (PD) and low pass filter (LPF) to be inverted to direct-current signal, which is then applied as varicap voltage of voltage control oscillator (VCO), thereby controlling the oscillation frequency.

This oscillation frequency f_{out} is divided down to 1/N by programmable divider (PD), so that one closed loop is fixed in the relation of

$$f_{out} = fr \times N$$

therefore, the operation of PLL is stabilized.

In the case of automatic channel selection, the dividing ratio N is altered by the PD by a command from IC906, and f_{out} is changed accordingly.

Programmable divider

Since the oscillation frequency of VCO is very high as compared with fr, it is divided down to 1/N (in the case of AM) to decrease the difference from fr in this circuit.

Phase detector

This is a circuit to detect the difference in frequency and phase between reference frequency fr and comparison frequency fr' in terms of pulses.

Low pass filter

This circuit is intended to vary and fix the output voltage in order to deliver a varicap voltage necessary for desired VCO frequency, on the basis of the output of the phase detector.

Prescaler

The local oscillation frequency in FM is higher than the operating speed of the programmable divider of PLL, thereby opposing to accurate operation. To avoid this, the local oscillation frequency is preliminarily divided down in this circuit to a proper frequency permitting reliable operation of the programmable divider.

2. GENERAL DESCRIPTION OF LOGIC UNIT ICS

(A) Pins in IC905 (IC for PLL)

Pin No.	symbol	Description
1	D_0	Input pin for synchronizing signal of x1 place
2	D_1	Input pin for synchronizing signal of x10 place
3	D_2	Input pin for synchronizing signal of x100 place
4	D_3	Input pin for synchronizing signal of x1000 place
5	N_0	Program input pin of 2^0 place in each digit (BCD input)
6	N_1	Program input pin of 2^1 place in each digit (BCD input)
7	N_2	Program input pin of 2^2 place in each digit (BCD input)
8	N_3	Program input pin of 2^3 place in each digit (BCD input)
9	ref_1	Reference frequency changeover signal input pin (low level in FM, high level in AM)
10	ref_2	Reference frequency changeover signal input pin (high level in FM, low level in AM)
11	GND	Ground
12	f_{out}	Reference frequency output pin for clock
13	STANBY	Logic hold signal input (holding in low level)
14	X_1	Input side of inverter for OSC
15	X_2	Output side of inverter for OSC
16	LO	Phase detection output pin
17	LPF_1	Low pass filter input
18	LPF_0	Low pass filter output
19	LD	Output pin becoming low level when unlocking
20	f_{AM}	Local oscillation frequency input pin of AM
21	f_{FM}	Input pin of signal of local oscillation frequency of FM being divided down by prescaler
22	V_{DD}	+ power supply

(B) Pins in IC906 (controller)

Pin No.	symbol	Description
1	B	Band display blanking output (GND)
2	NC	Floating terminal
3	BO	MW band split output (open)
4	MUTE	Muting output
5	T	Display decoder timing output
6	NC	Free terminal
7	NC	Free terminal
8	NC	Free terminal
9	KS0	Key sweep output 0
10	KS1	Key sweep output 1
11	KS2	Key sweep output 2
12	NC	Floating terminal
13	DO_0	PLL digit value data output 0
14	DO_1	PLL digit value data output 1
15	DO_2	PLL digit value data output 2
16	DO_3	PLL digit value data output 3
17	NC	Floating terminal
18	RESET	Reset terminal
19	GND	Power source (GND)
20	NC	Free terminal
21	NC	Free terminal
22	NC	Free terminal
23	OSC1	Oscillation terminal 1
24	OSC2	Oscillation terminal 2
25	CE	Chip enable (GND)
26	TEST	Test terminal (GND)
27	V_{CC}	Power source (+5V)
28	K0	Key input 0
29	K1	Key input 1
30	K2	Key input 2
31	K3	Key input 3
32	ME0	Memory channel display output 0
33	NC	Free terminal
34	NC	Free terminal
35	NC	Free terminal
36	ME1	Memory channel display output 1
37	ME2	Memory channel display output 2
38	ME	Memory display blanking output
39	TB	Time base input
40	LOCK	PLL lock signal input
41	REF2	PLL reference frequency changeover signal output 2

DESCRIPTION

Pin No.	symbol	Description
42	REF1	PLL reference frequency changeover signal output 1
43	B0	Band display output 0
44	B1	Band display output 1
45	ND0	PLL N value data, display decoder data output 0
46	ND1	PLL N value data, display decoder data output 1
47	NC	Free terminal
48	NC	Free terminal
49	NC	Free terminal
50	ND2	PLL N value data, display decoder data output 2
51	ND3	PLL N value data, display decoder data output 3
52	EN	Memory lamp output
53	SIG	Channel reception signal input
54	ST.ARi	Stereo-ARi station reception signal input

Clock function

The 11.52MHz frequency of crystal oscillation is divided down by IC905 to obtain 50 Hz, which is delivered from pin 12 and is counted by IC906, thereby displaying on clock.

Display method

The display method depends on the static method. When displaying a certain numeral, the corresponding pins specified by the "digit" and "segment" of IC907 are set to high level.

Method of inputting N value from controller (IC906) to PLL (IC905)

BCD signals are used as the input signal (No) of pins 1 to 8 in PLL (IC905). The following example illustrates the case of No=5964.

(Reception frequency: 87.5 MHz, local oscillation: 98.2 MHz)

$$No = \sum_{j=0}^{3} \{10^j \sum_{i=0}^{3} (2^i N_{ji})\} = \{(N_{33}\, N_{32}\, N_{31}\, N_{30})_2\ (N_{23}\, N_{22}\, N_{21}\, N_{20})_2\ (N_{13}\, N_{12}\, N_{11}\, N_{10})_2\ (N_{03}\, N_{02}\, N_{01}\, N_{00})_2\}_{10}$$

Where, $(\ )_n$: display in notation to the base of n

N_{ij} : 0 or 1

N_{33} : not to be used as amount of information (either 0 or 1)

N_{32} : 1 in FM, 0 in AM

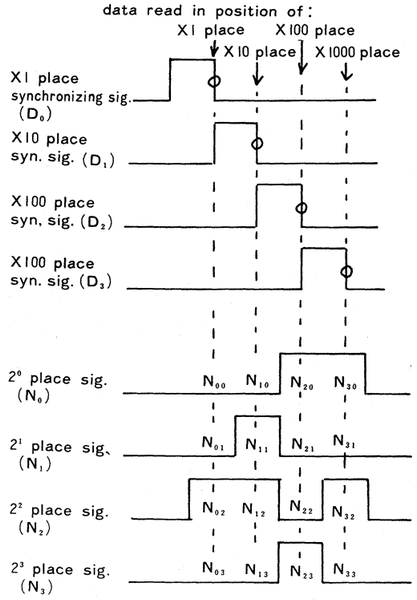
When $No = (5964)_{10}$:

$$No = \{(0\,1\,0\,1)_2\ (1\,0\,0\,1)_2\ (0\,1\,1\,0)_2\ (0\,1\,0\,0)_2\}_{10}$$

(N_{33} N_{32} N_{31} N_{30} | N_{23} N_{22} N_{21} N_{20} | N_{13} N_{12} N_{11} N_{10} | N_{03} N_{02} N_{01} N_{00})

5 | 9 | 6 | 4

data read in position of:



SDK SCAN CONTROL CIRCUIT

⑭ becomes low level when SDK lamp is on.

Ⓚ is a input signal to LSI. While the signal is low level, scan operation is continued even if there is a radio stop command. While the signal is high level, scan operation stops if there is a radio stop command.

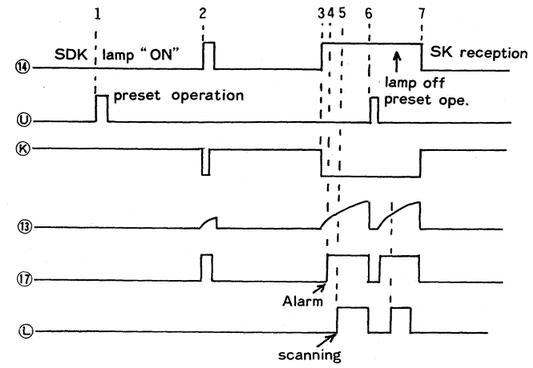
Ⓤ is a mute signal. This signal becomes high level, when each operation button is pushed.

⑬ is a signal delivered from SDK lamp and becomes high level in several seconds after SDK lamp is off.

Ⓛ is a scan signal and is input to LSI. When this signal is high level, scan operation begins.

⑰ is a alarm generating signal and delivered to IC650. When this signal is high, alarm begins.

NOTE) Q821~825 are all INVERTER.
C821, D822, D823 and D825 are elements for delay.



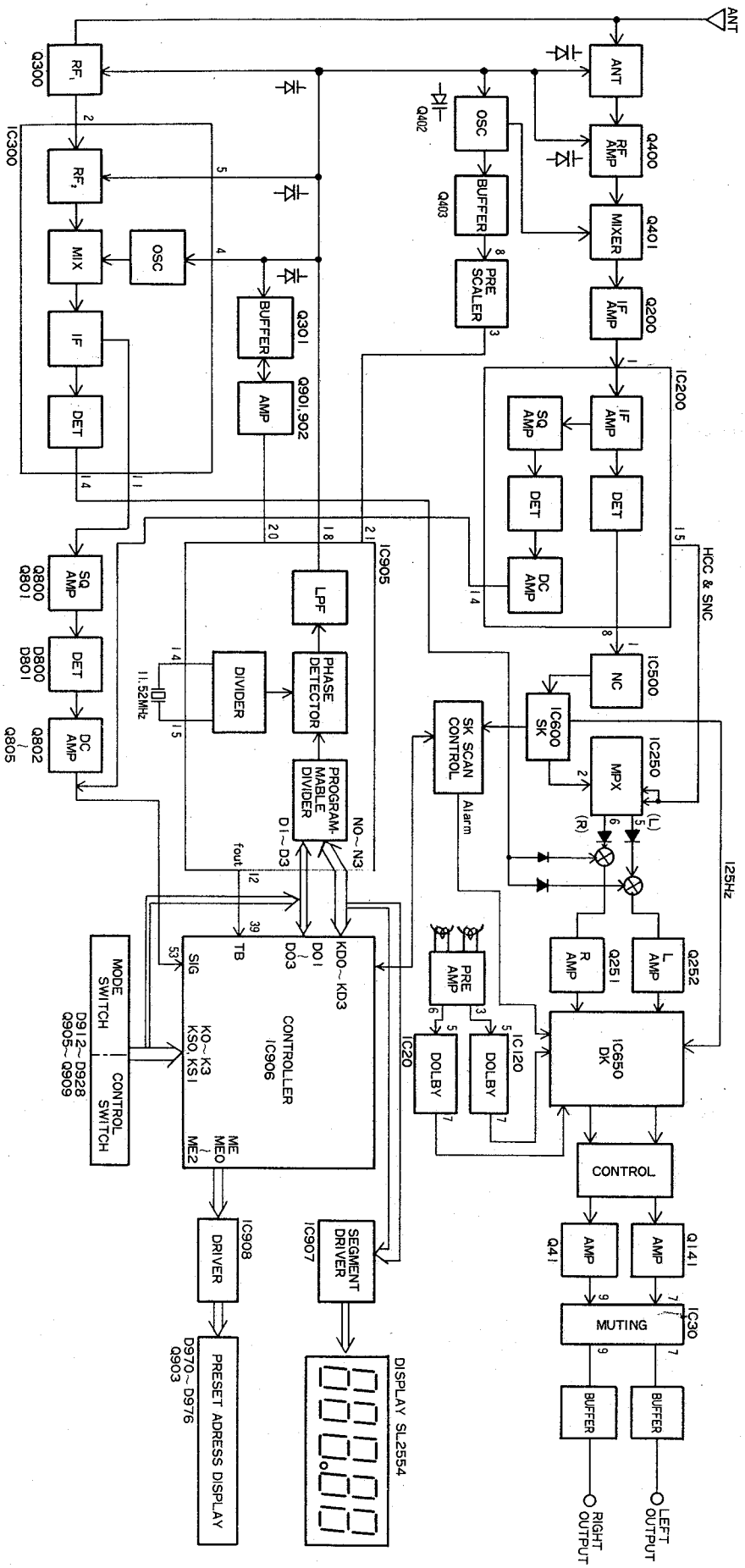
1. In case of changing to other SK station by preset button while SDK switch is on and SK station is received.
2. When SK lamp is flashing
3. When SK lamp becomes off.
4. When alarm begins.
5. When scan operation begins.
6. When preset button is pushed again while scanning, alarm and then scan begins if there is no SK station at the time.
7. When scanning stops at the reception of SK station.

POWER SUPPLY CHANGEOVER CIRCUIT

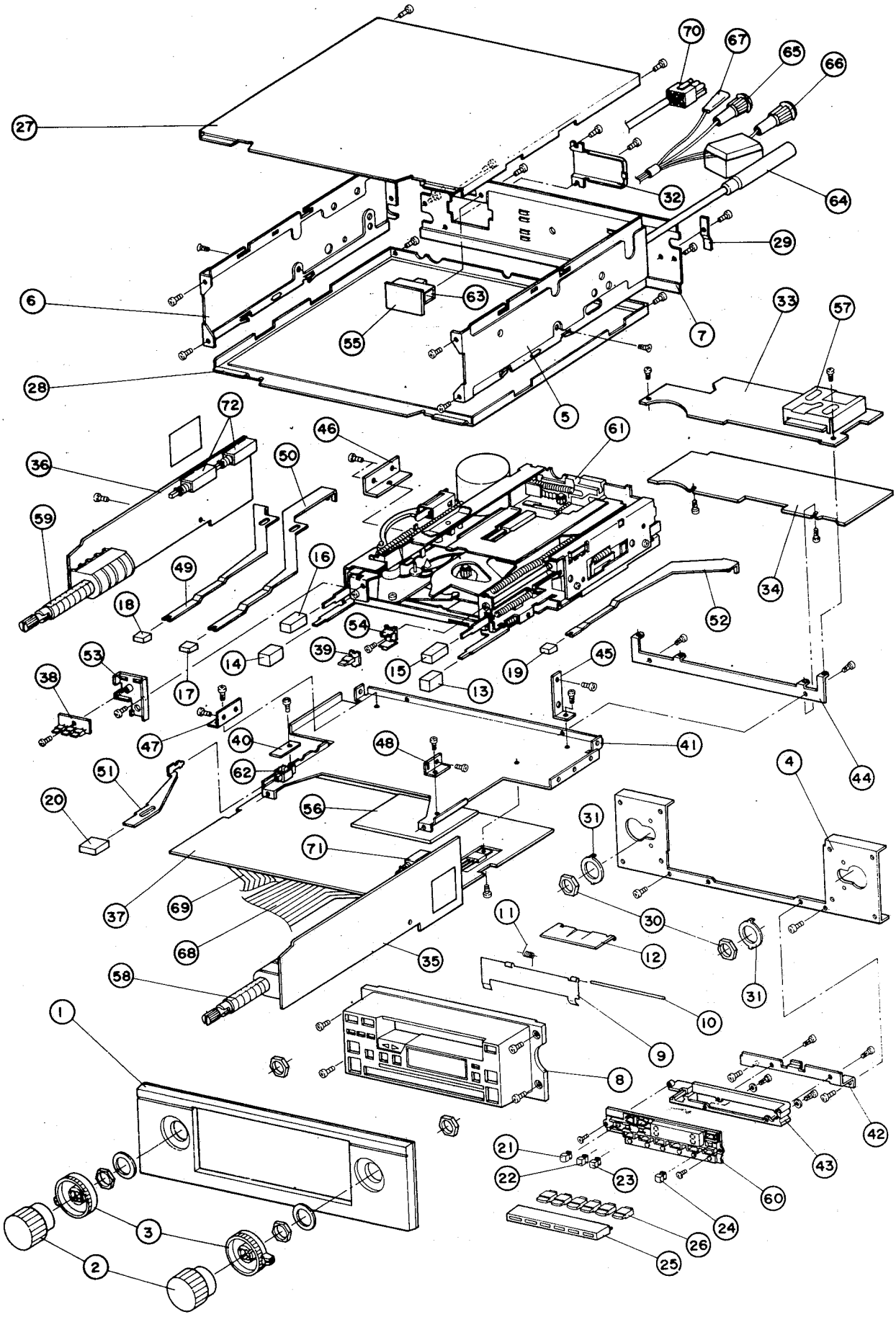
	Ⓖ	Ⓗ	①	②	③
LW	low	low	12V	0V	0V
MW	low	high	12V	12V	0V
FM	high	low	0V	0V	12V

Ⓖ and Ⓗ are control signals from logic LSI.
①, ② and ③ are +B power supplies to radio.
NOTE) Q811, 814, 816 and 817 are INVERTER.
Q813, 815 and 818 are switching transistor.

BLOCK DIAGRAM



EXPLODED VIEW



PARTS LIST

Key No.	Ref. No.	Part No.	Description	Q'ty
PACKAGE PARTS				
		R-4075292	Individual carton	1
		R-4171916	Styro-foam cushion, Right	1
		R-4171938	Styro-foam cushion, Left	1
		R-4075368	Protector	1
		R-4774717	Instruction book	1
		R-4773695	Guarantee card	1
		R-357529-1	Polyethylene bag, 260x340, Set	1
			Polyethylene bag, 80x240, Panel	1
		R-357527	Polyethylene bag, 100x100, Accessory	1
		R-357528	Polyethylene bag, 100x200, Accessory, Remote control	2
		R-4075064	Case	1
		R-4774982	Caution card	1
ACCESSORY				
1		R-3974160	Trim panel	1
2		R-A74437	Knob assembly, Volume/Tuning	2
3		R-3973084	Knob, Balance/Tone	2
		R-247206	Nut	6
		R-118092	Washer	2
		R-1273027	Metal bracket	2
		R-1273028	Metal bracket	2
			Screw, Bind Hd., 4x6	2
			External tooth lock washer, Metal, 10	2
		R-S17172	Fuse, 0.6A	1
		R-S17045	Fuse, 2A	1
		R-R7006	Noise suppression resistor	1
		R-C4702	Noise suppression capacitor	1
		R-S37333	Lead terminal, Earth	1
		R-S17475	Connector	2
		R-408219	Sheet, Remote control	2
			Tap. Screw, Pan Hd., 5x12	2
REMOTE CONTROL				
		R-S872269	Remote control assembly	1
		R-3972385	Case	(1)
		R-3973779	Panel, BAND	(1)
		R-3973700	Knob, SCAN	(1)
		R-3973998	Knob, LW	(1)
		R-3973997	Knob, MW	(1)
		R-3973996	Knob, FM	(1)
		R-1272453	Metal bracket	(1)
		R-4470300	Rubber sheet	(1)
		R-S37315	Lead terminal assembly	(1)
		R-4172677A	Printed circuit board	(1)
			Tap. Screw, Pan Hd., 2.6x5	(4)
CABINET				
4		R-1272841	Metal casing, Front	1
5		R-1272448	Metal casing, Right	1
6		R-1272449	Metal casing, Left	1
7		R-1272842	Metal casing, Rear	1
8		R-A75761	Nose panel assembly	1
9		R-2672761	Cassette door	1
10		R-1570129	Shaft, Cassette door	1
11		R-1570330A	Coil spring, Cassette door	1
12		R-1272441	Metal bracket, Cassette door	1
13		R-3973075	Knob, EJECT (▬)	1
14		R-3973076	Knob, REVERSE (◁▷)	1
15		R-3973077	Knob, F. F (▷▷)	1
16		R-3973078	Knob, RWD (◁◁)	1
17		R-3973079	Knob, DOLBY (⊃⊂)	1
18		R-3973992	Knob, TAPE	1
19		R-3972630	Knob, SDK	1
20		R-3973981	Knob, LOUD	1
21		R-S872236	Knob assembly, FM	1
22		R-S872237	Knob assembly, MW	1
23		R-S872238	Knob assembly, LW	1
24		R-S872239	Knob assembly, MEMO	1
25		R-3973970	Case, Soft touch knob	1
26		R-3973072	Knob, Soft touch	6
27		R-1272059A	Metal lid, Top	1
28		R-A74443	Metal lid assembly, Bottom	1
		R-4774715	Specification sheet	1
		R-4772211A	Label	1
29		R-1272860	Earth terminal	1
		R-4774334	Label, Fuse 2A	1
		R-4774335	Label, Fuse 600 mA	1
30		R-247206	Nut	2
31		R-1270744	Washer	2
32		R-1272859	Metal bracket, Lead	1
		R-4774716	Label, Switch	1
		R-4774904	Label, Lead	1
CHASSIS				
33		R-A75694	Printed circuit board assembly, FM	1
34		R-A75695	Printed circuit board assembly, AM	1
35		R-A75762	Printed circuit board assembly, MPX	1
36		R-A75763	Printed circuit board assembly, DOLBY	1
37		R-A75764	Printed circuit board assembly, LOGIC	1
38		R-4172969	Printed circuit board, LED	1
39		R-4172970	Printed circuit board, LED (L/D)	1
40		R-4172971	Printed circuit board, SW	1
41		R-A75699	Base chassis assembly	1
42		R-1272845	Metal bracket, Display	1
43		R-3973971	Fix plastic board, Display	1
44		R-1272844	Metal bracket, P. C. B.	1
45		R-1272846	Metal bracket, Mechanism right back	1
46		R-1272847	Metal bracket, Mechanism left front	1
47		R-1272848	Metal bracket, Mechanism left back	1
48		R-1272849	Metal bracket, Mechanism right front	1
49		R-1272463	Lever, TAPE	1
50		R-1272464	Lever, Dolby	1
51		R-1272850	Lever, LOUD	1
52		R-1272851	Lever, SDK	1
53		R-3972634A	Fix plastic board, LED	1
54		R-3973082	Fix plastic board, LED	1
		R-4172052	Protector, Mechanism	1
			UL tube, No.3 30 mm, Lead	1
55		R-4172972	Printed circuit board, SW	1
			UL tube, No.1 30 mm, Lead	1
	(LOGIC)			
56		R-1272646A	Shield case	2
COIL & TRANSFORMER				
	L910 (FM)	R-W1736	Choke coil, 50μH	1
	L200	R-W1798-1	Choke coil	1
	L40	R-W6735	Choke coil	1
	L500	R-W1055	Choke coil, 1μH	1
	T200 (AM)	R-W5T778	IF transformer	1
	L300,301	R-W17031	Choke coil, 6.8μH	2
	L304	R-W17038	Choke coil, 680μH	1
	L302	R-W8796-3	OSC coil	1
	L303	R-W87035	OSC coil	1

NOTES: 1. Part orders must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

PARTS LIST

Key No.	Ref. No.	Part No.	Description	Q'ty
	T300	R-W27136	ANT coil	1
	T301	R-W27139	ANT coil	1
	T302	R-W27133	RF coil	1
	T303	R-W27138	RF coil	1
	T304	R-W5T7025	IF transformer	1
	T800	R-W5T798	IF transformer	1
	(MPX)			
	T250,251	R-M1710	Multi filter	2
	T600	R-W5T795	IF transformer	1
	(LOGIC)			
	L901	R-W1055	Choke coil, 1μH	1
	L903	R-W1064	Choke coil, 5μH	1
CONTROLS				
	(FM)			
57		R-S871961	Tuner pack assembly	1
	R211,214	R-R110742	Preset resistor, 200k	2
	(AM)			
	CT300, 301, 302, 303	R-C0724-6	Trimmer, 20 pF	4
	(MPX)			
58	VR50, S905, 906, 917	R-R1167344	Variable resistor, 50k-B	1
	R255,259	R-R110740	Preset resistor, 10k	2
	R600,653	R-R110730	Preset resistor, 5k	2
	(DOLBY)			
59	VR39, 40, 46, S52, 907	R-R1167345	Variable resistor, 50k	1
	R31,131	R-R110750	Preset resistor, 50k	2
	(LOGIC)			
	CT901	R-C0739	Trimmer, 30 pF	1
SEMICONDUCTORS				
	IC903		Integrated circuit, μPC7808H	1
	D3, 23		LED, SLP237B	2
	D601		LED, SLP441B	1
	D252		LED, SLP-137B	1
	D923~928		Diode, 1S1588 or DS442	6
60		R-A75700	Multi LED display assembly	1
	(FM)			
	IC200		Integrated circuit, LA1140	1
	IC500		Integrated circuit, LA2101	1
	Q200		Transistor, 2SC1923	1
	D200		Zener diode, BZ-081	1
	D201		Zener diode, WZ-071	1
	(AM)			
	IC300		Integrated circuit, LA1130	1
	Q300, 301		Transistor, 2SK49	2
	Q800		Transistor, 2SK49	1
	Q801		Transistor, 2SC668	1
	Q802, 803, 804		Transistor, 2SC536	3
	Q805		Transistor, 2SA608	1
	D301, 304, 308	KV1235Y	Vari-Cap, Do not use diode from different gang diodes but a pair of diodes from a same gang diodes.	1
	D302, 303, 305, 306, 307, 309, 310, 316		Diode, 1TT73C	8
	D300, 311, 312, 314, 315, 800, 801, 803		Diode, 1S1588 or DS442	8
	D313		Zener diode, BZ-081	1
	D802		Zener diode, WZ-058	1
	(MPX)			
	IC30		Integrated circuit, TA7324P	1
	IC250		Integrated bircuit, LA3370	1
	IC600		Integrated circuit, LA2200	1
	IC650		Integrated circuit, LA2211	1
	Q51, 151		Transistor, 2SD400	2

Key No.	Ref. No.	Part No.	Description	Q'ty
	Q251, 252		Transistor, 2SC536	2
	Q600		Transistor, 2SC536	1
	D41, 42, 43		Diode, 1S1588	2
	D44		Diode, SM-1A-02	1
	D255, 256, 261, 262, 602, 603, 604, 605, 650, 651, 652		Diode, 1S1588 or DS442	11
	D254		Zener diode, BZ-081	1
	D600		Zener diode, WZ-071	1
	(DOLBY)			
	IC1		Integrated circuit, M51521L	1
	IC20, 120		Integrated circuit, NE646BN	2
	Q40, 141		Transistor, 2SC536	2
	Q811, 814, 816, 817, 819		Transistor, 2SC536	5
	Q812		Transistor, 2SA733	1
	Q813, 815, 818		Transistor, 2SB544	3
	D45		Diode, SM-1A-02	1
	D811		Diode, 1S1588 or DS442	1
	(LOGIC)			
	IC901		Integrated circuit, μPC78L05	1
	IC902		Integrated circuit, μPC78L08	1
	IC904		Integrated circuit, HD10551	1
	IC905		Integrated circuit, HD44015	1
	IC906		Integrated circuit, HD4475F	1
	IC907		Integrated circuit, HA12009	1
	IC908		Integrated circuit, HD74LS42P	1
	Q821, 822, 823, 824, 825		Transistor, 2SC536	5
	Q901, 902, 905, 906, 907, 908, 909, 910		Transistor, 2SC536	8
	Q903, 904, 911		Transistor, 2SC608	3
	D901		Zener diode, WZ-058	1
	D902		Zener diode, GZA5.1U	1
	D903		Zener diode, RD10EB3	1
	D904		Zener diode, GZA5.1L	1
	D821, 822, 823, 824, 825, 826, 906~920, 929, 930, 961		Diode, 1S1588 or DS442	24
MISCELLANEOUS				
61		R-S872282	Mechanism assembly, FEC 130S	1
62	S50	R-S47656	Push switch	1
63	S51	R-S47196	Slide switch	1
64		R-S2156-7	Antenna socket	1
65		R-S17265-2	Fuse holder, 2A	1
66		R-A75805	Fuse holder assembly, 0.6A	1
		R-S17303-1	Fuse holder	(1)
	L902	R-W6735	Choke coil	(1)
		R-3973475	Case	(1)
		R-4171183	Protector	(1)
		R-4172564	Printed circuit board	(1)
67		R-S37199-2	Lead terminal; Power antenna	1
		R-S17172	Fuse, 0.6A	1
		R-S17045	Fuse, 2A	1
68		R-S37331	F. P. C.	1
69		R-S37332	F. P. C.	1
	CN2	R-S27502-12	Socket, 120 mm	1
	SN3	R-S27502-10	Socket, 100 mm	1
	CN5	R-S27502-32	Socket, 320 mm	1
	CN6	R-S27522-3	Socket, 120 mm	1
	CN8	R-S27503-10	Socket, 100 mm	1
	CN15	R-S27503-12	Socket, 120 mm	1
70		R-S37314	Lead terminal assembly	1
	(FM)			
		R-247505-2	Pin, 15 mm	2
	CF200	R-S17146-2	Ceramic, filter, Red	1
	CF201	R-S17350	Ceramic filter, Red	1
	HIC501	R-CXC718	Packed resistor & capacitor, 2100-1	1
	HIC502	R-CXC719	Packed resistor & capacitor, 2100-2	1
		R-S27321-2	Plug, 2P	2

NOTES: 1. Part orders must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

PARTS LIST

Key No.	Ref. No.	Part No.	Description	Q'ty
		R-S27321-7	Plug, 7P	1
	CN11	R-S27516-12	Socket, 120 mm	1
	(AM)			
	CF800	R-S17421-1	Ceramic filter	1
	CF300	R-S17422	Ceramic filter	1
	CF301	R-S17421	Ceramic filter	1
		R-S27321-2	Plug, 2P	2
		R-S27321-5	Plug, 5P	1
		R-S27321-6	Plug, 6P	1
	(MPX)			
71	S600	R-S47400-1	Push switch, SDK	1
		R-S27321-2	Plug, 2P	2
		R-S27321-3	Plug, 3P	2
		R-S27321-12	Plug, 12P	1
	CN12	R-S27517-24	Socket, 240 mm	1
	(DOLBY)			
72	S2,20	R-S47434-1	Push switch	2
		R-S27321-2	Plug, 2P	1
		R-S27321-3	Plug, 3P	1
		R-S27321-7	Plug, 7P	2
	CN10	R-S27515-16	Socket, 160 mm	1
	CN14	R-S27521-1	Socket, 340 mm	1
	(LOGIC)			
	Xtal 901	R-S17442	Xtal osscillator	1
	CN1	R-S27502-5	Socket, 50 mm	1
	CN4	R-S27482-10	Socket, 100 mm	1
	CN7	R-S27438-5	Socket, 50 mm	1
	CN13	R-S27527-5	Socket, 160 mm	1
	RESISTORS			
	(Resistors are of carbon type, ±5% allowance and $\frac{1}{4}$ W unless otherwise noted.)			
	(FM)			
	R200		1.8 k ohm	1
	R201, 209		10 k ohm	2
	R202		1 k ohm	1
	R203, 205		330 ohm	2
	R206		100 ohm	1
	R207		220 k ohm	1
	R208		3.9 k ohm	1
	R210		22 k ohm	1
	R212		47 k ohm	1
	R213		39 k ohm	1
	R217, 505		56 k ohm	2
	R500		470 k ohm	1
	R502		820 ohm	1
	R503		2.7 k ohm	1
	R506, 507		6.8 k ohm	2
	R508		120 ohm	1
	R216		Solid, 180 ohm, ±5%, $\frac{1}{2}$ W	1
	R215		Metal oxide film, 68 ohm, ±10%, 1W	1
	(AM)			
	R300, 303, 305, 307, 311, 320, 341, 800, 806, 815		100 k ohm	10
	R301		820 ohm	1
	R302, 306, 309, 310, 312, 323, 351, 811		1 k ohm	8
	R304, 322		100 ohm	2
	R308		220 k ohm	1
	R313		47 k ohm	1
	R314, 803, 814		4.7 k ohm	3
	R315		2.2 k ohm	1
	R318		47 ohm	1
	R319, 807		1.2 k ohm	2
	R324		22 k ohm	1
	R325, 326, 804		10 k ohm	3
	R801		560 ohm	1
	R330		390 ohm	1
	R817		68 k ohm	1
	R352		5.6 k ohm	1
	R802, 809		3.3 k ohm	2

Key No.	Ref. No.	Part No.	Description	Q'ty
	R805, 813		8.2 k ohm	2
	R808		1.5 k ohm	1
	R810		12 k ohm	1
	R812		1 M ohm	1
	R816		3.9 k ohm	1
	R818		Solid, 120 ohm, ±5%, $\frac{1}{2}$ W	1
	R321		Metal oxide film, 68 ohm, ±10%, 1W	1
	(MPX)			
	R49		56 k ohm	1
	R52		2.2 k ohm	1
	R53, 260		15 k ohm	2
	R54		100 k ohm	1
	R55, 601, 658, 662		10 k ohm	4
	R57, 58		18 k ohm	2
	R59, 61, 253, 269, 270, 603, 661, 664		1 k ohm	8
	R60, 160, 258		27 k ohm	3
	R251, 263, 264		22 k ohm	3
	R252, 254, 654		1.2 k ohm	3
	R265, 266		82 k ohm	2
	R267, 268		470 k ohm	2
	R271, 272		4.7 k ohm	2
	R602, 607, 608		3.3 k ohm	3
	R606, 610		560 ohm	2
	R609		820 k ohm	1
	R611		2.7 k ohm	1
	R612		680 ohm	1
	R651		47 ohm	1
	R652		6.8 k ohm	1
	R655		1.8 k ohm	1
	R659		220 ohm	1
	R663		12 k ohm	1
	R665		560 k ohm	1
	R62, 162, 650		Solid, 120 ohm, ±10%, $\frac{1}{2}$ W	3
	R250		Metal oxide film, 68 ohm, ±5%, 1W	1
	(DOLBY)			
	R1, 101		3.3 k ohm	2
	R2, 102		150 ohm	2
	R3, 103		150 k ohm	2
	R4, 104		12 k ohm	2
	R5, 105		330 k ohm	2
	R6, 106, 835		15 k ohm	3
	R7, 8, 9		680 ohm	3
	R107, 21, 121, 27, 127, 63		1 k ohm	6
	R20, 120		47 ohm	2
	R22, 122		180 k ohm	2
	R23, 123		270 k ohm	2
	R24, 124		47 k ohm	2
	R26, 126		180 ohm	2
	R29, 129, 30, 130, 833, 836		1.5 k ohm	6
	R38		390 ohm	1
	R41, 141		22 k ohm	2
	R42, 142		1.2 k ohm	2
	R43		4.7 ohm	1
	R44, 144		82 k ohm	2
	R45, 145		470 k ohm	2
	R46, 146		560 ohm	2
	R47, 147, 50, 51		4.7 k ohm	4
	R48		100 ohm	1
	R828, 834		10 k ohm	2
	R829, 831, 832		100 k ohm	3
	R830		2.2 k ohm	1
	R837		560 k ohm	1
	R25, 125		Metal oxide film, 3.3k ohm, ±1%, $\frac{1}{4}$ W	2
	(LOGIC)			
	R821		470 k ohm	1
	R822		220 k ohm	1
	R828, 830		47 k ohm	2
	R829, 901		4.7 k ohm	2
	R823, 920, 921, 925, 926, 928, 930		Carbon, 10 k ohm, ±10%, $\frac{1}{8}$ W	4

NOTES: 1. Part orders must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

PARTS LIST

Key No.	Ref. No.	Part No.	Description	Q'ty
	R824, 826, 934, 935, 980, 991~994, 936~939, 981		Carbon, 47 k ohm, ±10%, 1/8 W	14
	R902, 911, 941~944		Carbon, 22 k ohm, ±10%, 1/8 W	6
	R903, 922		Carbon, 1 k ohm, ±10%, 1/8 W	2
	R904, 905		Carbon, 6.8 k ohm, ±10%, 1/8 W	2
	R906		Carbon, 15 k ohm, ±10%, 1/8 W	1
	R907		Carbon, 330 ohm, ±10%, 1/8 W	1
	R908, 990		Carbon, 680 ohm, ±10%, 1/8 W	2
	R913, 947~976		Carbon, 560 ohm, ±10%, 1/8 W	31
	R914, 929		Carbon, 33 k ohm, ±10%, 1/8 W	2
	R916, 917, 927, 931		Carbon, 100 k ohm, ±10%, 1/8 W	4
	R918, 946		Carbon, 390 ohm, ±10%, 1/8 W	2
	R923		Carbon, 1.5 k ohm, ±10%, 1/8 W	1
	R924		Carbon, 8.2 k ohm, ±10%, 1/8 W	1
	R940		Carbon, 12 k ohm, ±10%, 1/8 W	1
	R945, 970		Carbon, 1 M ohm, ±10%, 1/8 W	2
	R909		Carbon, 470 ohm, ±10%, 1/4 W	1
	R910		Carbon, 680 ohm, ±10%, 1/4 W	1
	R912		Carbon, 470 ohm, ±10%, 1/4 W	1
	R919		Carbon, 220 ohm, ±10%, 1/4 W	1
	R825, 827		Carbon, 4.7 k ohm, ±10%, 1/8 W	2
	R932		Metal oxide film, 91 k ohm, ±10%, 1/4 W	1
CAPACITORS				
	C39		Electrolytic 1000 mfd/16V HS	1
	C56		Electrolytic 1000 mfd/16V H	1
	(FM)			
	C201		SBL ceramic, 0.001 mfd, ±20%, 25V	1
	C202, 204, 205, 206, 211, 213, 214		SBL ceramic, 0.022 mfd, ±20%, 25V	7
	C203, 505		SBL ceramic, 0.01 mfd, ±20%, 25V	2
	C216		SBL ceramic, 0.039 mfd, ±20%, 25V	1
	C507, 510		SBL ceramic, 0.0022 mfd, ±20%, 25V	2
	C508		SBL ceramic, 0.0068 mfd, ±20%, 25V	1
	C208, 212, 501		Ceramic, 33 pF, ±10%, 50V, SL	3
	C500		Ceramic, 5 pF, ±10%, 50V, SL	1
	C502		Ceramic, 330 pF, ±10%, 50V, SL	1
	C504		Ceramic, 330 pF, ±10%, 50V, B	1
	C207		Electrolytic 1 mfd/50V K	1
	C209, 503, 509		Electrolytic 4.7 mfd/35V M	3
	C210		Electrolytic 100 mfd/10V H	1
	C215		Electrolytic 1 mfd/50V M	1
	C506		Electrolytic 1 mfd/50V M	1
	C512		Electrolytic 100 mfd/16V H	1
	(AM)			
	C301, 325, 302, 334		SBL ceramic, 0.01 mfd, ±20%, 25V	4
	C303, 304, 305, 309, 310, 314, 317, 318, 319, 322, 330, 335, 801, 802, 803		SBL ceramic, 0.039 mfd, ±20%, 25V	15
	C306		SBL ceramic, 0.0068 mfd, ±20%, 25V	1
	C307		SBL ceramic, 0.1 mfd, ±20%, 25V	1
	C316, 326, 315		SBL ceramic, 0.022 mfd, ±20%, 25V	3
	C324		SBL ceramic, 0.0022 mfd, ±20%, 25V	1
	C331		SBL ceramic, 0.012 mfd, ±20%, 25V	1
	C300		Ceramic, 24 pF, ±10%, 50V, SL	1
	C308		Ceramic, 2 pF, ±10%, 50V, SL	1
	C313		Ceramic, 70 pF, ±5%, 50V, SL	1
	C323		Ceramic, 180 pF, ±5%, 50V, SL	1
	C338		Ceramic, 12 pF, ±10%, 50V, SL	1
	C343		Ceramic, 20 pF, ±10%, 50V, SL	1
	C344		Ceramic, 270 pF, ±10%, 50V, B	1
	C800		Ceramic, 5 pF, ±10%, 50V, SL	1
	C311		Styrol, 450 pF, ±5%, 50V	1
	C312		Styrol, 220 pF, ±5%, 50V	1
	C321, 329, 806		Electrolytic 100 mfd/10V H	3
	C327		Electrolytic 2.2 mfd/50V M	1
	C328		Electrolytic 0.47 mfd/50V K	1
	C332		Electrolytic 22 mfd/10V H	1
	C333		Electrolytic 10 mfd/16V M	1
	C336		Electrolytic 47 mfd/16V H	1
	C804, 805, 807		Electrolytic 1 mfd/50V M	3

Key No.	Ref. No.	Part No.	Description	Q'ty
	(MPX)			
	C49, 50, 57, 58, 256		SBL ceramic, 0.039 mfd, ±20%, 25V	5
	C258, 265, 266		SBL ceramic, 0.01 mfd, ±20%, 25V	3
	C259		SBL ceramic, 0.1 mfd, ±20%, 25V	1
	C260, 261		SBL ceramic, 0.0068 mfd, ±20%, 25V	2
	C263, 264		SBL ceramic, 0.0033 mfd, ±20%, 25V	2
	C604		SBL ceramic, 0.0022 mfd, ±20%, 25V	1
	C606		SBL ceramic, 0.001 mfd, ±20%, 25V	1
	C253, 262		Styrol, 1000 pF, ±10%, 50V	2
	C600		Styrol, 350 pF, ±10%, 50V	1
	C611		Styrol, 2200 pF, ±10%, 50V	1
	C607		Ceramic, 220 pF, ±10%, 50V, B	1
	C51, 257, 654		Electrolytic 10 mfd/16V K	3
	C52, 152, 610		Electrolytic 4.7 mfd/25V K	3
	C53, 651		Electrolytic 470 mfd/16V H	2
	C54, 154, 657, 658		Electrolytic 100 mfd/6.3V H	4
	C250, 251		Electrolytic 1 mfd/50V M	2
	C252		Electrolytic 0.47 mfd/50V M	1
	C254, 267~270, 608, 656, 660, 655, 659		Electrolytic 4.7 mfd/35V M	10
	C255, 603		Electrolytic 100 mfd/10V H	2
	C275		Electrolytic 47 mfd/10V H	1
	C601		Electrolytic 0.22 mfd/50V K	1
	C602		Electrolytic 2.2 mfd/50V M	1
	C609		Electrolytic 470 mfd/10V H	1
	(DOLBY)			
	C4, 104, 42, 142		SBL ceramic, 0.01 mfd, ±20%, 25V	4
	C43, 143		SBL ceramic, 0.033 mfd, ±20%, 25V	2
	C45, 145		SBL ceramic, 0.0018 mfd, ±20%, 25V	2
	C25, 125		Mylar, 0.047 mfd, ±5%, 50V	2
	C28, 128		Mylar, 0.0047 mfd, ±5%, 50V	2
	C29, 129		Mylar, 0.027 mfd, ±5%, 50V	2
	C30, 130		Mylar, 0.0056 mfd, ±5%, 50V	2
	C2, 102, 32, 132		Ceramic, 470 pF, ±10%, 50V, B	4
	C1, 101, 47, 147, 48, 148		Electrolytic 4.7 mfd/25V K	6
	C3, 103		Electrolytic 47 mfd/6.3V H	2
	C6, 106, 20, 120		Electrolytic 10 mfd/16V K	4
	C21, 121		Electrolytic 220 mfd/16V H	2
	C22, 122		Electrolytic 0.33 mfd/10V Alsicon	2
	C23, 123		Electrolytic 0.1 mfd/10V Alsicon	2
	C24, 124, 27, 127, 33, 133		Electrolytic 10 mfd/16V M	6
	C26, 126		Electrolytic 1 mfd/50V M	2
	C31, 131		Electrolytic 220 mfd/10V H	2
	C44, 144		Electrolytic 0.33 mfd/50V K	2
	C46		Electrolytic 1000 mfd/16V HS	1
	C105		Electrolytic 330 mfd/10V H	1
	(LOGIC)			
	C901~905, 910, 913, 917, 918, 923, 928, 950		SBL ceramic, 0.01 mfd, ±20%, 25V	12
	C912, 951		SBL ceramic, 0.047 mfd, ±20%, 25V	2
	C940		SBL ceramic, 0.033 mfd, ±20%, 25V	1
	C919		Ceramic, 47 pF, ±10%, 50V, SL	1
	C920		Ceramic, 51 pF, ±10%, 50V, SL	1
	C924		Ceramic, 56 pF, ±10%, 50V, SL	1
	C925		Ceramic, 560 pF, ±10%, 50V, B	1
	C821		Electrolytic 100 mfd/6.3V H	1
	C822		Electrolytic 22 mfd/6.3V K	1
	C907, 908, 909, 914, 915, 916		Electrolytic 10 mfd/16V K	6
	C911		Electrolytic 470 mfd/10V H	1
	C921		Electrolytic 4.7 mfd/25V N.P ±20%	1
	C922, 927		Electrolytic 1 mfd/50V K	2
SCREW, NUT & WASHER				
			Tap. Screw, Pan Hd., 3x6 Chassis-Chassis	6
			Tap. Screw, Pan Hd., 3x6 Back chassis-Metal lid	4
			Tap. Screw, Pan Hd., 3x6 Front chassis-Base chassis	2
			Tap. Screw, Flat Hd., 3x6	2

NOTES: 1. Part orders must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

PARTS LIST

Key No.	Ref. No.	Part No.	Description	Q'ty
			Side chassis-Base chassis	
			Screw, Pan Hd., 3x3.5 S-tight	2
			Metal bracket-Base chassis	
			Tap. Screw, Pan Hd., 2.6x5	4
			P. C. B.	
			Screw, Pan Hd., 2.6x4 S-tight	6
			Mechanism-Metal bracket	
			Tap. Screw, Pan Hd., 3x4	2
			Metal bracket-Base chassis	
			Tap. Screw, Pan Hd., 2.6x5	1
			Metal bracket-Base chassis	
			Tap. Screw, Pan Hd., 3x6	2
			Front chassis-Metal bracket	
			Tap. Screw, Pan Hd., 2.6x5	2
			Metal bracket-Fix plastic board	
			Tap. Screw, Pan Hd., 2x6	2
			Fix plastic board-Multi LED display	
			Tap. Screw, Pan Hd., 1.7x6	2
			Fix plastic board-Case	
			Tap. Screw, Pan Hd., 3x5	4
			Nose panel-Front chassis	

Key No.	Ref. No.	Part No.	Description	Q'ty
			Screw, Pan Hd., 2.6x5 S-tight	1
			Mechanism-Fix plastic board	
			Screw, Pan Hd., 2.6x5	1
			Mechanism-Fix plastic board	
			Tap. Screw, Pan Hd., 2.3x4	1
			Fix plastic board-LED P. C. B.	
			Screw, Pan Hd., 2.6x5	1
			SW P. C. B.	
			Tap. Screw, Pan Hd., 3x4	1
			Logic IC	
			Tap. Screw, Pan Hd., 3x5	1
			Earth terminal	
			Plain washer, Metal, 2	2
			Fix plastic board-Case	
			Screw, Pan Hd., 2.6x4	2
			Slide switch	
			Tap. Screw, Pan Hd., 3x5	2
			Metal bracket, Lead	
			Tap. Screw, Pan Hd., 3x6	2
			P. C. B.-Base chassis	

NOTES: 1. Part orders must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

PARTS LIST (CASSETTE MECHANISM)

Key No.	Ref. No.	Part No.	Description	Q'ty
			CASSETTE MECHANISM (R-S872282)	
1		R-A73901	Chassis assembly	1
2		R-A73746	Metal bracket assembly, Reverse	1
3			E-ring, Metal, E1.5	1
4			E-ring, Metal, E2.0	1
10		R-A73747	Metal bracket assembly, F. F gear	1
5		R-3972435A	Gear (J)	1
126			Thrust Washer, Metal, 4x0.25	1
7		R-3972434	Gear (I)	1
8		R-1570280B	Spring	1
9			CS-ring, 4	1
6		R-437313	Felt (B)	1
11		R-A73748	Head lever assembly	1
12		R-1271451B	Metal bracket, Change	1
13		R-3972423	Nylon push, 2.0	3
14		R-A73749	Pintch roller lever assembly	2
15		R-1570193	Spring, Front	1
16		R-1570194	Spring, Back	1
17			E-ring, Metal, E2.0	2
18		R-1271461	Washer	1
19			E-ring, Metal, E2.0	1
20			E-ring, Metal, E1.5	1
21		R-257188	Washer	1
22		R-1570198	Spring	1
23			E-ring, Metal, E2.0	1
24		R-1570184B	Spring	1
25		R-1271447	Metal bracket, F. F lever lock	1
26		R-1570195	Spring	1
27		R-3972423	Nylon push, 2.0	1
28		R-257188	Washer	2

Key No.	Ref. No.	Part No.	Description	Q'ty
29		R-A73750	Lever assembly, Reverse	1
30			E-ring, Metal, E2.0	1
31		R-1271446B	Lachet, Reverse lever lock	1
32		R-1570197A	Spring	1
33			E-ring, Metal, E2.0	1
34		R-257188	Washer	2
35		R-1271449A	Lever, F. F (Right)	1
36		R-1570192B	Spring	1
37		R-257188	Washer	2
38		R-A73751	Lever assembly, F. F (Left)	1
39		R-1570192B	Spring	1
40		R-1570187	Spring	1
41			E-ring, Metal, E2.0	1
42		R-A73752	Sencer metal (B) assembly	1
43			Thrust Washer, Metal, 2x0.5	1
			Thrust Washer, Metal, 2.5x0.25	1
44		R-A74239	Sencer metal (A) assembly	1
45		R-3972441	Sencer	1
46		R-3972246	Nylon push, 1.5	1
47		R-1570186	Spring	1
48		R-1271443A	Metal bracket, Reverse	1
49			E-ring, Metal, E1.5	2
50		R-A73754	Metal bracket assembly, Flapper	1
51			E-ring, Metal, E1.5	1
			Thrust Washer, Metal, 3x0.5	1
52		R-A73755	Latchet assembly	1
53			E-ring, Metal, E2.0	1
54		R-3972246	Nylon push, 1.5	1
55		R-1570180A	Spring	1
56			E-ring, Metal, E2.0	1
57		R-A74433	Metal bracket assembly, Rack	1

NOTES: 1. Part orders must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

PARTS LIST (CASSETTE MECHANISM)

Key No.	Ref. No.	Part No.	Description	Q'ty
58			E-ring, Metal, E2.0	1
59		R-1271458B	Metal bracket	1
60		R-1570179	Spring	1
61		R-A73756	Metal bracket assembly, Gear	1
62			E-ring, Metal, E2.0	1
63		R-1271455	Metal bracket	1
64		R-1271908	Lever, EJECT	1
65			E-ring, Metal, E2.0	2
66		R-1570181B	Spring, EJECT	1
68		R-1171186	Connecting lever (A)	1
69		R-1171187A	Connecting lever (B)	1
70		R-A73757	Sub chassis assembly	1
71			Screw, Bind Hd., M2.6x4	1
72			Tap. Screw, Pan Hd., M2.6x5 P-tight	3
73		R-3972443D	Rack, Play	1
74		R-1570182A	Spring, Rack	1
75		R-S07383	Head	1
76		R-S47469	Push switch	1
77		R-4171822	Printed circuit board	1
			V. wire, Red, 0.12/7 L=65	1
			V. wire, White, 0.12/7 L=65	1
			V. wire, Blue, 0.12/7 L=65	1
			V. wire, Orange, 0.12/7 L=65	1
			V. wire, Black, 0.12/7 L=85	1
			Nylon tube, ϕ3.0xL8	1
78		R-S47470	Snap switch	1
		R-S27322-7	Socket, 50 mm, 005	1
80		R-1570104	Spring, Azimuth	1
81		R-1271396	Lug	1
82			Screw, Pan Hd., M2x4 (+,−)	2
83			Screw, Pan Hd., M2x8 S-tight	1
84		R-A74123	Metal bracket assembly, Cassette guide	1
88		R-A73759	Reverse lever assembly	1
89		R-1271453	Lever, F. F (Left)	1
90		R-1570188	Spring, F. F	1
91		R-1570189D	Spring, Reverse	1
92		R-3972439A	Lever (A), Push switch	1
93		R-3972246	Nylon push, 1.5	1
94			Screw, Pan Hd., M2.6x5 S-tight	3
95		R-A74099	Cassette case assembly	1
96		R-A74125	Metal bracket assembly	1
97		R-1570162D	Shaft	1
98			E-ring, Metal, E2.5	1
99			E-ring, Metal, E3.0	1
100		R-3972962B	Guide	1
101		R-1570336A	Spring	1
102		R-1570185A	Spring	1
103		R-1570196B	Spring	1
104		R-S17294E	DC solenoide	1
		R-S3063	Lug	1
			Nylon tube, ϕ2xL6	1
105		R-S47490	Reaf switch, Eject	1
		R-S3063	Lug	1
106			Screw, Pan Hd., M2x6 S-tight	1
107			Screw, Pan Hd., M2.6x5 S-tight	1
			H. tube, ϕ5.5 Cl 15	1

Key No.	Ref. No.	Part No.	Description	Q'ty
108		R-A73762	Gear base assembly	1
109		R-1271441	Metal bracket	2
110		R-1570168	Shaft	2
111		R-1271461	Washer	2
112		R-3972432A	Gear (G)	1
113		R-A74093	Gear (H) assembly	1
114		R-3972246	Nylon push, 1.5	1
115		R-3972429	Gear (D)	1
116			E-ring, Metal, E1.5	1
117		R-A73764	Gear (C) assembly	1
118		R-1570396	Spring	1
119		R-3972438	Reel ring	1
120			Thrust Washer, Metal, 2ϕx0.25t	1
121			E-ring, Metal, E1.2	1
122		R-A73765	Lever (B) assembly, PLAY	1
127		R-3972436	Gear (K)	1
123		R-3972437A	Gear (L)	1
124		R-3972246	Nylon push, 1.5	1
115		R-3972429	Gear (D)	1
116			E-ring, E1.5	1
117		R-A73764	Gear (C) assembly	1
118		R-1570396	Spring	1
119		R-3972438	Reel ring	1
130			Thrust Washer, Metal, 2ϕx0.25t	1
131			E-ring, Metal, E1.2	1
132		R-1570191B	Spring	2
133			Screw, Bind Hd., M2.6x4	1
134			Screw, Pan Hd., M2.6x5 S-tight	1
135		R-S57220	Motor	1
136			Screw, Bind Hd., M2.6x3	2
		R-S17269	Cord clip	1
			KV wire, 0.203/7-OS-1, L=240 Red	1
142		R-A73766	Flyweel assembly	2
143		R-4470091A	Belt	1
144		R-A73767	Thrust metal assembly	1
145			Screw, Pan Hd., M2.6x5 S-tight	1
146			Screw, Bind Hd., M2.6x4	1
			I. tube, ϕ0.7 Gr 10, Resistor	1
			N. tube, ϕ3.0 Cl 20	1
			Solid, 5.6 ohm, $\pm$10%, $\frac{1}{2}$W	1
137		R-A75720	Side chassis assembly	1
138		R-1570337	Spring	1
139		R-1570338	Spring	1
141			Screw, Pan Hd., M2.6x4 S-tight	3
147			E-ring, Metal, E2.0	1
		R-S27322-3	Socket, 50 mm, 005	1
		R-S17269	Cord clip	1
			Bind tube, ϕ1.0 L=40	1

NOTES: 1. Part orders must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

EXPLODED VIEW (CASSETTE MECHANISM)